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

March 23, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-3305881, 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: SOMMERVILLE UNIT 1H
Farm Name: DAVIS, SHIRLEY JO
API Well Number: 47-3305881
Permit Type: Horizontal 6A Well
Date Issued: 03/23/2016

API Number: 33-05881

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 one hundred (100) 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. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

1/29

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WW-6B
(04/15)

API NO. 47- 033 -
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

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

1) Well Operator: Antero Resources Corporat	494488557	033-Harrison	Union	Big Isaac 7.5'
	Operator ID	County	District	Quadrangle

2) Operator's Well Number: Sommerville Unit 1H Well Pad Name: Shirley Pad

3) Farm Name/Surface Owner: Shirley Jo Davis Public Road Access: CR 30

4) Elevation, current ground: ~1342' Elevation, proposed post-construction: 1328'

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No No

SDW 2/18/2016

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 7500' TVD, Anticipated Thickness- 50 feet, Associated Pressure- 3200#

8) Proposed Total Vertical Depth: 7500' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17000' MD

11) Proposed Horizontal Leg Length: 8539'

12) Approximate Fresh Water Strata Depths: 36', 196', 265', 466'

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

14) Approximate Saltwater Depths: 560', 789'

15) Approximate Coal Seam Depths: 256', 423', 490', 616'

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 X

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

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(04/15)

API NO. 47- 033 -
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS	
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#	520' *See #19	520' *See #19	CTS, 722 Cu. Ft.	✓
Coal	9-5/8"	New	J-55	36#	2475'	2475'	CTS, 1008 Cu. Ft.	✓SDW
Intermediate								
Production	5-1/2"	New	P-110	20#	17000'	17000'	CTS, 4275 Cu. Ft	2/18/2016
Tubing	2-3/8"	New	N-80	4.7#		7100'		
Liners								

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	1000	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

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

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WW-6B
(10/14)

API NO. 47- 033 -
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

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."

Anticipated Max Pressure - 9300 lbs
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 13.61 acres

22) Area to be disturbed for well pad only, less access road (acres): 2.39 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% calcium chloride 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.

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WV Department of Environmental Protection

WW-9
(2/15)

4703305881

API Number 47 - 033 - _____
Operator's Well No. Sommerville 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) Tenmile Creek Quadrangle Big Isaac 7.5'

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 _____

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2/18/2016

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)

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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 _____

Company Official (Typed Name) Cole Kilstrom

Company Official Title Manager, Environmental & Regulatory

KARA QUACKENBUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144026267
MY COMMISSION EXPIRES JULY 21, 2018

Subscribed and sworn before me this 18 day of January, 20 16

Kara Quackenbush Notary Public

My commission expires July 21, 2018

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Form WW-9

Operator's Well No. Sommerville Unit 1H

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 13.61 Prevegetation pH _____

Lime 2-4 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

Well Pad (2.39) + Aux. Pad (1.24) + Tank Pad (1.21) + Access Road (1.29) + Additional Clearing (7.48) = 13.61 Acres

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Fox Tail/ Grassy	40
		Perennial Rye	30
		Crown Vetch	20

*or type of grass seed requested by surface owner

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: [signature]

Comments: Re-Permit expired

Title: OOG Inspector Date: 2/18/2016

Field Reviewed? (X) Yes ( ) No

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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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13. Escaid 110
    Drilling Fluild Solvent – Aliphatic Hydrocarbon
14. Ligco
    Highly Oxidized Leonardite – Filteration 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

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Well Site Safety Plan
Antero Resources

Well Name: **Westfall Unit 1H (API# 47-033-05793), Sommerville Unit 1H, Sommerville Unit 2H, Avery Unit 1H, Avery Unit 2H**

SDW
2/18/2016

Pad Location: **SHIRLEY PAD**
Harrison County/Union District

GPS Coordinates: Lat 39°12'44.8"/Long -80°31'17.05" (NAD83)

Driving Directions:

From Clarksburg: Head west on US Route 50 West for 8.2 miles. Turn left on Co Route 31/Jarvisville-Makin Road. Continue on Co Route 31 for 4.8 miles. Turn right onto Co. Route 31/Jarvisville Road. Continue on Route 31 for 2.6 miles. Take a slight right onto Co. Route 30. Continue for 0.4 miles. Access Road will be on the right.

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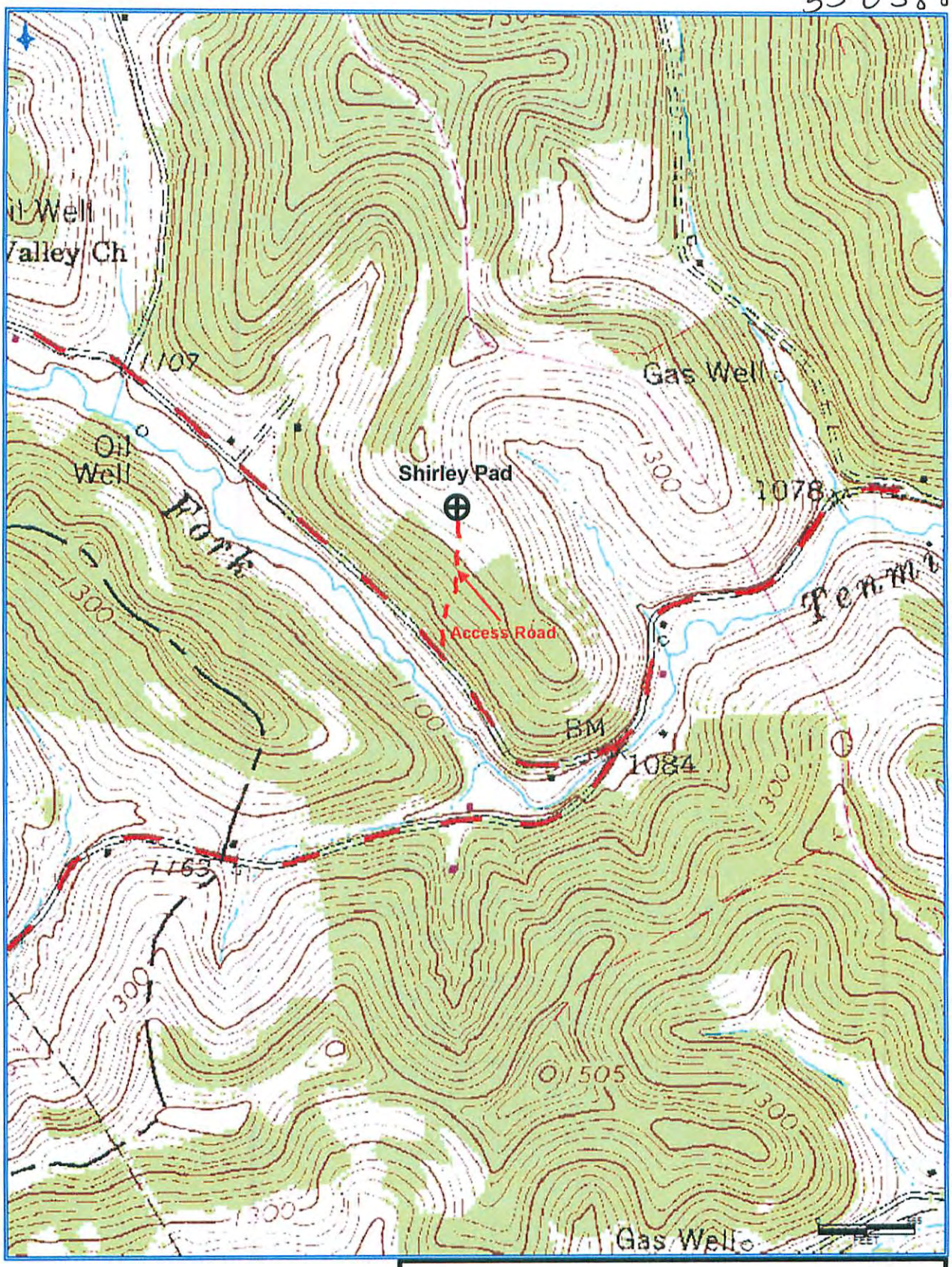
EMERGENCY (24 HOUR) CONTACT 1-800-878-1373

33-05881



Antero Resources Corporation

Appalachian Basin

Sommerville Unit 1H

Harrison County

Quadrangle: Big Isaac

Watershed: Tenmile Creek

District: Union

Date: 9-11-2013

I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Kenneth J. Plum, P.S. 2216

Notes:

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

Well No. Sommerville Unit 1H Top Hole coordinates are
N: 261,112.18' Latitude: 39°12'44.60"
E: 1,710,530.27' Longitude: 80°31'17.79"
Bottom Hole coordinates are
N: 269,673.07' Latitude: 39°14'08.97"
E: 1,708,429.15' Longitude: 80°31'45.73"

UTM Zone 17, NAD 1983

Top Hole Coordinates	Bottom Hole Coordinates
N: 4,340,464.981m	N: 4,343,062.402m
E: 541,316.415m	E: 540,632.826m

Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

FILE NO: 310-36-U-12
DRAWING NO: Sommerville 1H Well_Rev
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: January 15 2016
OPERATOR'S WELL NO. Sommerville Unit 1H
API WELL NO Hua
47 - 033 - 05881
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION: ☐ STORAGE ☐ DEEP ☒ SHALLOW
LOCATION: ELEVATION: Existing - 1342' Proposed - 1328'
WATERSHED: Tenmile Creek QUADRANGLE: Big Isaac
DISTRICT: Union
COUNTY: Harrison
SURFACE OWNER: Shirley Jo Davis
Harold Gaines, et al; Helen Marie Swiger, et al
Benji W. Cunningham, et ux; Claude E. Bennett, et ux
Leon Wilson, et al; CNX Gas Company LLC
Raymond W. Federer & Sally D. Federer
ACREAGE: 87.70 45.79 24.12; 60; 54 60; 60; 145; 44
ROYALTY OWNER: Douglas Roy Meister; Freda M. Allman; Sally D. Federer; Paul D. Smith
LEASE NO: 21443; DAD65592/001 DV019289 DAD36726; 21669
ACREAGE: 22.75; 112.64; 48.3
PROPOSED WORK: ☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION
☒ PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
☐ PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,500' TVD 17,000' MD

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

33-05881

WW-6A1

Operator's Well Number Sommerville 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
Harold Gaines et al Lease DAD36726 ✓			
Harold Gaines, et al	James F. Scott	1/8	1088/0380
James F. Scott	Convest Production Company	Assignment	1179/1010
Convest Production Company	BNG, Inc.	Assignment	1179/1039
BNG, Inc.	Stonewall Gas Company	Assignment	1257/0413
Stonewall Gas Company	Dominion Appalachian Development, Inc.	Assignment	Exhibit 2
Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC	Merger	Exhibit 3
Dominion Appalachian Development, LLC, DEPI, & DTI, Inc.	Antero Resources Appalachian Corporation	Assignment	1423/1068
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Helen Marie Swiger et al Lease 21669			
Helen Marie Swiger, et al	Clarence W. Mutschelknaus	1/8	1045/0232
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	1456/0823
Bluestone Energy Partners	Antero Resources Bluestone, LLC, a wholly owned subsidiary of Antero Resources Appalachian Corporation	Merger	Misc. 0035/1236
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Claude E. Bennett et ux Lease DAD65592/001 ✓			
Claude E. Bennett, et ux	Scott Oil Company	1/8	1158/1012
Scott Oil Company	Emax Oil Company	Assignment	1206/1115
Emax Oil Company, et al	Antero Resources Appalachian Corp.	Assignment	1455/0161
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
CNX Gas Company LLC Lease ✓			
CNX Gas Company, LLC	Antero Resources Appalachian Corp.	1/8	1505/1269
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Benji. W. Cunningham et ux Lease ✓			
Benji W. Cunningham	South Penn Oil Company	1/8	0092/0041
South Penn Oil Company	Pennzoil Company	Merger	Exhibit 4
Pennzoil Company	PennZenergy Company	Merger	Exhibit 5
PennZenergy Company	Devon Energy Production Company, LP	Name Change	AOI 0058/0223
Devon Energy Production Company, LP	East Resources, Inc.	Assignment	1326/0017
East Resources, Inc.	Antero Resources Appalachian Corp.	Assignment	1506/0346
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Raymond W. Federer & Sally D. Federer Lease ✓			
Sally D. Federer	Antero Resources Appalachian Corp.	1/8	1483/0711
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Sally D. Federer Lease ✓			
Sally D. Federer	Antero Resources Appalachian Corp.	1/8	1483/0711
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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JAN 29 2016
WV Department of
Environmental Protection

***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****

33-05881

WW-6A1

Operator's Well Number Sommerville 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
Freda M. Allman Lease DV019289 ✓			
Freda Allman	Consolidated Gas Supply Corporation	1/8	1062/0836
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	1136/0250
Consolidated Gas Transmission Corporation	CNG Development Company	Assignment	1143/0921
CNG Development Company	CNG Producing Company	Certificate of Incorporation	Exhibit 6
CNG Producing Company	Dominion Exploration & Production, Inc.	Amended Certificate of Authority	AOI 0058/0366
Dominion Exploration & Production, Inc., DTI, and DAD, LLC	Antero Resources Appalachian Corporation	Assignment	1423/1068
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Leon Wilson et al Lease 21443 ✓			
Leon Wilson, et al	Clarence W. Mutschelknaus	1/8	1092/0085
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	1441/0245
Bluestone Energy Partners	Antero Resources Bluestone, LLC, a wholly owned subsidiary of Antero Resources Appalachian Corporation	Merger	Misc. 0035/1236
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Paul D. Smith Lease ✓			
Paul D. Smith	Antero Resources Appalachian Corp.	1/8+	1503/1173
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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***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****

33-05881

WW-6A1
(5/13)

Operator's Well No. Sommerville 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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Douglas Roy Meister Lease				
	Douglas Roy Meister, heir to Bernice Cleo Meister, a/k/a Bernice Meister	Antero Resources Appalachian Corporation	1/8+	1515/0280
	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: Senior Vice President of Production

33-05881

FORM WW-6A1
EXHIBIT 1

FILED

JUN 10 2013

IN THE OFFICE OF SECRETARY OF STATE

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

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

APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY

Penney Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

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

**** 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:

1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation

2. Date Certificate of Authority was issued in West Virginia: 6/25/2008

3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)

4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)

5. 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

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WV Department of Environmental Protection

*Important Legal Notice Regarding Signature: Per 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.

33-05881

FORM WW-6A1
EXHIBIT 2, PAGE 1

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.

ARTICLE IV

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

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FORM WW-6A1
EXHIBIT 2, PAGE 2

33-05881

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. Chewning
Name: Thomas N. Chewning
Its: Vice Chairman

STONEWALL GAS COMPANY,
a Virginia corporation

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

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FORM WW-6A1
EXHIBIT 3

33-05881

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

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Office of Oil and Gas
JAN 29 2016
WV Department of

February 23, 2006

Betty Ireland

Secretary of State

33-05881

FORM WW-6A1 - EXHIBIT 4

Name SOUTH PENN OIL COMPANY

Foreign Corporation Delaware Book 199 Page 350

Admitted July 9, 1955

Attorney

Reports

Address: Drake Theater Bldg.,
106 Duncomb St., Oil City, Penna.

CHANGE OF NAME: THE PENNZOIL COMPANY, filed July 31, 1963; Book 238, Page 309.

Column 1	4	3	7
Column 2	5	5	0
Column 3	1	3	6
Column 4	7	5	5

Gas

of

ction

FORM WW-6A1 - EXHIBIT 5

33-05881

State of West Virginia

Certificate

I, Ken Hechler, Secretary of State of the State of West Virginia, hereby certify that

the following and hereto attached is a true copy of the articles of merger of Pennzenergy Company, a non qualified Delaware corporation and Pennzoil Company, a qualified Delaware corporation.

Therefore, I hereby issue this CERTIFICATE OF MERGER, merging Pennzenergy Company with and into Pennzoil Company, the survivor, which then changed its name to Pennzenergy Company.

Given under my hand and the Great Seal of the State of West Virginia on this First *day of* February *19* 99

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Environmental Protection

Secretary of State

FORM WW-6A1
EXHIBIT 6, PAGE 1

33-05881

State of West Virginia

CERTIFICATE

I, Ken Hechler, Secretary of State of the State of West Virginia, hereby certify that

originals of a Notice of Intention to Withdraw with the application of

CNG DEVELOPMENT COMPANY

for a Certificate of Withdrawal from West Virginia, signed and verified, as required by the provisions of Chapter 31, Article 1, Section 60 of the West Virginia Code are filed in my office and conform to law. Therefore, I issue this

CERTIFICATE OF WITHDRAWAL

and I attach to this certificate a duplicate original of the application.

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

TENTH day of JULY, 19 91

Ken Hechler

Secretary of State.

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JAN 29 2016
WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 6, PAGE 2

33-05881

KEN HECHLER
FEE $5 00

TO BE FILED IN DUPLICATE
ORIGINALS

FILED
JUL 1 0 1991
OFFICE OF
RY OF STATE
WEST VIRGINIA

APPLICATION FOR CERTIFICATE OF WITHDRAWAL OF

CNG Development Company

In accordance with Chapter 31, Article 1, Section 60 of the Code of West Virginia, the undersigned corporation hereby applies for a certificate of withdrawal from West Virginia, and submits the following statement:

The name of the corporation is: CNG Development Company

It is incorporated under the laws of Delaware

IT IS NOT TRANSACTING BUSINESS IN WEST VIRGINIA.

It hereby surrenders its authority to transact business in West Virginia. It revokes the authority of its registered agent in West Virginia to accept service of process, and consents that service of process in any action, suit or proceeding based upon any course of action arising in West Virginia during the time the corporation was authorized to transact business in West Virginia may thereafter be made on the corporation by service thereof on the Secretary of State of West Virginia.

The post office address to which the Secretary of State may mail a copy of any process against the corporation is CNG Producing Company, CNG Tower, 1450 Poydras Street, New Orleans, LA 70112-6000 Attn: Corporate Secretary

The aggregate number of shares which it has authority to issue, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is

NUMBER OF SHARES	CLASS	SERIES	PAR VALUE/NO PAR
1,400,000	Common		$100

The aggregate number of its issued shares, itemized by classes, par value of shares, shares without par, and series, if any, within a class, as of this date is

NUMBER OF SHARES	CLASS	SERIES	PAR VALUE/NO PAR
1,168,410	Common		$100

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The amount of its state capital as of this date is $[illegible]

FORM WW-6A1
EXHIBIT 6, PAGE 3

33-05881

CNG Development Company (Through CNG Producing Company)

corporate name

President/Vice President

Secretary

State of Louisiana

Parish Orleans

I James E. Wright, Jr. a Notary Public, do

hereby certify that D. Malcolm Johns, Jr.

the Secretary

office

of CNG Producing Company

corporate name

office

appeared before me and they signed the foregoing as the act and deed of the corporation.

Notary Public

(notary seal)

My commission expires at death

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Office of Oil and Gas

JAN 29 2016

WV Department of
Environmental Protection

33-05881

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

January 19, 2016

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

RE: Sommerville Unit 1H
Quadrangle: Big Isaac 7.5'
Harrison County/Union District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Sommerville 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 from all leases through which the Sommerville Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

Kenneth Vaughn

Kenneth Vaughn
Landman

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JAN 29 2016
WV Department of
Environmental Protection

WW-6AC
(1/12)

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

Date of Notice Certification: 01/18/2016

API No. 47- 033 - 05881
Operator's Well No. Sommerville Unit 1H
Well Pad Name: Shirley 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:	West Virginia	UTM NAD 83 Easting:	541316.415m
County:	Union	Northing:	4340464.981m
District:	Harrison	Public Road Access:	CR 30
Quadrangle:	Big Isaac 7.5'	Generally used farm name:	Shirley Jo Davis
Watershed:	Tenmile Creek		

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.

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:

*PLEASE CHECK ALL THAT APPLY

OOG OFFICE USE ONLY

☐ 1. NOTICE OF SEISMIC ACTIVITY	or ☒ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
☐ 2. NOTICE OF ENTRY FOR PLAT SURVEY	or ☒ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☒ 3. NOTICE OF INTENT TO DRILL	or ☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☐ RECEIVED/ NOT REQUIRED
☒ 4. NOTICE OF PLANNED OPERATION		☐ RECEIVED
☒ 5. PUBLIC NOTICE		☐ RECEIVED
☒ 6. NOTICE OF APPLICATION		☐ RECEIVED

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WV Department of
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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.

33-05981

WW-6AC
(1/12)

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:	Antero Resources Corporation	Address:	1615 Wynkoop Street
By:	Kevin Kilstrom		Denver, CO 80202
Its:	Senior Vice President of Production	Facsimile:	303-357-7315
Telephone:	303-357-7310	Email:	asteele@anteroresources.com

NOTARY SEAL
KARA QUACKENBUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144028297
MY COMMISSION EXPIRES JULY 21, 2018

Subscribed and sworn before me this 18 day of January.

Kara Quackenbush Notary Public

My Commission Expires July 21, 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 depprivacyofficer@wv.gov.

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JAN 29 2016
WV Department of
Environmental Protection

WW-6A
(9-13)

API NO. 47- 033 - 05881
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

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: 1/21/2016 **Date Permit Application Filed:** 1/21/2016

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: Beverly D. Lowe
Address: 5021 Jarvisville Road
Salem, WV 26426
Name: Dusty A. Davis
Address: RR 2 Box 172A
Bristol, WV 26426

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Beverly D. Lowe
Address: 5021 Jarvisville Road
Salem, WV 26426
Name: Dusty A. Davis
Address: RR 2 Box 172A
Bristol, WV 26426

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

☑ COAL OWNER OR LESSEE
Name: PLEASE SEE ATTACHMENT
Address:

☑ COAL OPERATOR
Name: PLEASE SEE ATTACHMENT
Address:

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

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

*Please attach additional forms if necessary

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Office of Oil and Gas
JAN 29 2016
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47- 033 - 05881
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

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

Office of Oil and Gas
WV Department of Environmental Protection

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 any 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-10(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

Office of Oil and Gas
JAN 29 2016
WV Department of
Environmental Protection

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.**

WW-6A
(8-13)

API NO. 47- 033 - 0581
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

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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WW-6A
(8-13)

API NO. 47- 033 - 05881
OPERATOR WELL NO. Sommerville Unit 1H
Well Pad Name: Shirley Pad

Notice is hereby given by:

Well Operator: Antero Resources Corporation
Address: 1615 Wynkoop Street
Denver, CO 80202
Telephone: (303) 357-7310
Email: asteele@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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

KARA QUACKENBUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144028297
MY COMMISSION EXPIRES JULY 21, 2018

Subscribed and sworn before me this 21 day of January.

Kara Quackenbush Notary Public

My Commission Expires July 21, 2018

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33-05881

WW-6A Notice of Application Attachment (SHIRLEY PAD):

COAL OWNER, LESSEE OR OPERATOR

Owner: Anker Energy Corporation – Hunter Ridge Coal Company
c/o Corporation Service Company
Address: 2708 Cranberry Square
Morgantown, WV 26508

Owner: Anker West Virginia Mining Company – Wolf Run Mining Company
c/o Corporation Service Company
Address: 99 Edmiston Way
Buckhannon, WV 26201

Owner: Patriot Mining Company
c/o Corporation Service Company
Address: 2708 Cranberry Square
Morgantown, WV 26508

Owner: International Coal Group, Inc.
c/o Corporation Service Company
Address: 63 Corporate Center Dr.
Scott Depot, WV 25560

Operator: Consolidation Coal Company
CONSOL Energy, Inc. – CNX Center
Engineering & Operations Support – Coal
ATTN: Analyst
Address: 1000 CONSOL Energy Dr.
Canonsburg, PA 15317

WATER SOURCE OWNERS: These owners of water sources, within 1500' of the well pad, were notified of all well work permit applications.

TM 382/2.1
TM 382/2.1 – 2 Water Well: 1255', 1390'
Owner: Tommy L. & Linda D. Hall
Address: 7216 Jarvisville Road
Bristol, WV 26426

TM 362/26
TM 362/26 – 1 Water Well: 1290'
Owner: Steve Matthey & Mia K. Starkey
(1/4 interest of TM 362/26)
Address: 4681 Jarvisville Road
Salem, WV 26426

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33-05881

WATER SOURCES OWNERS CONTINUED:

Owner: Sarah Frances Corder
(1/8 interest of TM 362/26)
Address: 5135 S. Grant St.
Clarksburg, WV 26301

Owner: Bernard Earl Matthey
(1/8 interest of TM 362/26)
Address: 6461 Jarvisville Road
Bristol, WV 26426

Owner: Charles Edward Matthey
(1/8 interest of TM 362/26)
Address: HC 61 Box 39
Frametown, WV 26623

Owner: David Richard Matthey
(1/8 interest of TM 362/26)
Address: 2625 Jarada Ave.
Pensacola, FL 32526

Owner: Robert Lee Matthey
(1/8 interest of TM 362/26)
Address: RR 6 Box 520B
Clarksburg, WV 26301

Owner: Newell Varner
(1/8 interest of TM 362/26)
Address: 167 Mount View Dr. SE
Huntsville, AL 35803

WATER SOURCE OWNERS: Greater than 1500'

*NOTE: On attached water well map, 4 water wells were identified, but they are located greater than 1500' from the subject well pad location.

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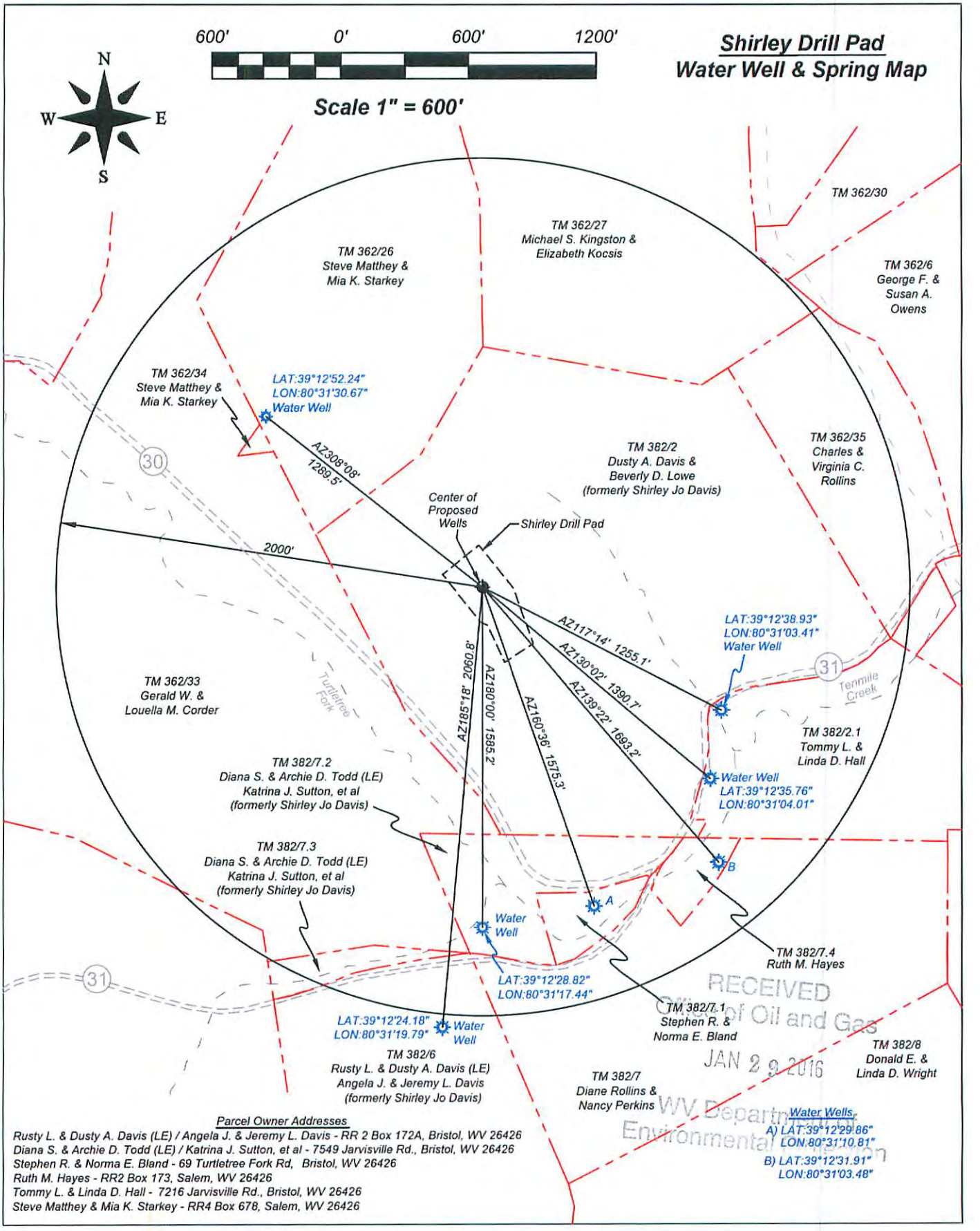
33-05881



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Parcel Owner Addresses

Rusty L. & Dusty A. Davis (LE) / Angela J. & Jeremy L. Davis - RR 2 Box 172A, Bristol, WV 26426
Diana S. & Archie D. Todd (LE) / Katrina J. Sutton, et al - 7549 Jarvisville Rd., Bristol, WV 26426
Stephen R. & Norma E. Bland - 69 Turtletree Fork Rd, Bristol, WV 26426
Ruth M. Hayes - RR2 Box 173, Salem, WV 26426
Tommy L. & Linda D. Hall - 7216 Jarvisville Rd., Bristol, WV 26426
Steve Matthey & Mia K. Starkey - RR4 Box 678, Salem, WV 26426

WW-6A4
(1/12)

Operator Well No. Sommerville Unit 1H
Multiple Wells on Shirley Pad

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.
Date of Notice: 11/17/2015 **Date Permit Application Filed:** 01/18/2016

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided,* That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however,* That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Beverly D. Lowe
Address: 5021 Jarvisville Rd.
Salem, WV 26426

Name: Dusty A. Davis
Address: RR 2 Box 172 A
Bristol, WV 26426

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia
County: Harrison
District: Union
Quadrangle: Big Isaac 7.5'
Watershed: Tenmile Creek

UTM NAD 83 Easting: 541318.45m (Approx. Pad Center)
Northing: 4340462.53m (Approx. Pad Center)
Public Road Access: CR 30
Generally used farm name: Shirly Jo Davis

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. 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.

Notice is hereby given by:

Well Operator: Antero Resources Appalachian Corporation
Address: 1615 Wynkoop St.
Denver, CO 80202
Telephone: 303-357-7323
Email: asteele@anteroresources.com
Facsimile: 303-357-7315

Authorized Representative: Ashlie Steele
Address: 1615 Wynkoop St.
Denver, CO 80202
Telephone: 303-357-7323
Email: asteele@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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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Tax Map 382 Parcel 2

WW-6A5
(1/12)

Operator Well No. Sommerville Unit 1H

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 01/21/2016 **Date Permit Application Filed:** 01/21/2016

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Beverly D. Lowe
Address: 5021 Jarvisville Rd.
Salem, WV 26426

Name: Dusty A. Davis
Address: RR 2 Box 172A
Bristol, WV 26426

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia
County: Harrison
District: Union
Quadrangle: Big Isaac 7.5'
Watershed: Tenmile Creek

UTM NAD 83 Easting: 541316.415m
Northing: 4340464.981m
Public Road Access: CR 30
Generally used farm name: Shirly Jo Davis

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. 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 Operator: Antero Resources Corporation
Telephone: (303) 357-7310
Email: asteele@anteroresources.com

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

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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.

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

Reissued January 20, 2016

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 Shirley Pad, Harrison County
Sommerville Unit 1H Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2013-0922 which has been issued to Antero Resources Corporation for access to the State Road for a well site located off of Harrison County Route 30 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

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

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

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
Sillica, 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

Shirley Well Pad Site

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 Shirley Well Pad Site Site Design, Construction Plan, & Erosion and 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 Kelly Surveying, a West Virginia registered professional engineer.

Requirement §5.5.a. *All applications for well work permits involving well sites that will disturb three acres or more of surface (excluding pipelines, gathering lines, and roads) shall be accompanied by a site construction plan certified by, a West Virginia registered professional engineer. The plan shall 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 Sheets 3 and D1-D2 of "Shirley Well Pad Site Site Design, Construction Plan, & Erosion and Sediment Control Plans" (Site Design) prepared and certified by Kelly Surveying. 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 locating the site in relation to the surrounding area and roads;*

Antero Response

Please refer to the vicinity map on Sheet 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;*

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Antero Response

The limit of disturbance for the Shirley Well Pad Site can be found on "Plan View" on Sheets 7-8 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 "Plan View" maps on Sheet 7-8 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 "Plan View" on Sheet 7-8 as well as the "Cross Section – Well Pad," "Cross Sections – Tank Pad," and "Cross Sections – Access Roads" on Sheets 10-12 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 "Plan view" of the Site Design on Sheets 7-8 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 the ""Plan View" on Sheet 7-8 as well as the "Cross Section – Well Pad," "Cross Sections – Tank Pad," and "Cross Sections – Access Roads" on Sheets 10-12 for a cross-section of the location. The cut and fill volumes can be found in "Schedule of Quantities" on sheet 2.

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 Plan View on Sheets 7-8.

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

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

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 (6") in diameter and larger shall be cut and logs stacked, unless agreed to otherwise by the operator and timber owner. However in no case shall organic material be buried;*

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 General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2 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 General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2 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 General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2 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 §5.5.c.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.

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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

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.*** *Soil Fill material will be placed in lifts or layers over the area to receive the fill. Soil Lift thickness of soil shall be between six (6) and twelve (12) inches, provided that proper compaction can be achieved throughout the entire thickness of the lift*

Antero Response
Please refer to the Construction and E&S Control General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2 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 so that the entire surface of each fill lift is compacted to an appropriate density. Each lift shall be compacted before beginning the next lift;*

Antero Response
Compaction compliance measures are outlined in the Construction and E&S Control General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2. 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 and maintained to intercept water and to divert surface water runoff around the site; and*

Antero Response
Construction and E&S Control General Notes and Erosion and Sediment Control Details on Sheets 3 and D1-D2 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 for each additional fifty (50) vertical feet of slope and shall be a minimum of ten (10) feet wide.*

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Antero Response
All Antero contractors shall be notified of and comply with the measures outlined in Section 5.5.c.11. of §35-8-5.5.

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Antero Resources Corporation Erosion and Sediment Control Plan for Shirley Well Pad Site

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 Shirley Well Pad Site Site Design, Construction Plan, & Erosion and 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 Kelly Surveying, 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 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 Shirley Well Pad Site Site Design, Construction Plan, & Erosion and Sediment Control Plans (Site Design) prepared and certified by Kelly Surveying. 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.

A. Make Utility one-call.
B. Erect sign at entrance and ensure copy of E/S Plan is present in mailbox.
C. Construct according to on-site E/S Plan:

1) Install Stabilized Construction Entrance at beginning of Access Road.
2) Clear the Proposed Well Pad Access Road, Existing Well Access Road, Tank Pad Access Road, Well Pad, Auxiliary Pad, and Tank Pad (Clearing is defined as the removal of trees, brush, down timber, rotten wood, rubbish, and other objectionable material at or above the original ground elevation not designated to be retained. Clearing also includes the removal of fences, posts, signs and demolition or removal of other obstructions interfering with the proposed work).
3) Install 24" Compost Filter Sock #1-32 and install Super Silt Fence #1-42
4) Grub the Proposed Well Pad Access Road (Grubbing is defined as the removal from below the original ground elevations of stumps, roots, stubs, brush, organic materials, and debris as well as concrete and brick, and other obstructions interfering with the proposed work).
5) Construct the Proposed Well Pad Access Road
   Install Pipe Crossing #1-8
6) Seed and Mulch all disturbed areas along the Proposed Well Pad Access Road.
7) Grub the Proposed Well Pad and Auxiliary Pad and place topsoil in topsoil stockpile
8) Construct the Proposed Well Pad and Auxiliary Pad
   Install Toe Keys and Bonding Benches
   Install Well Pad Berm and Access Road Swell at Well Pad Entrance
   Install on-pad sumps
9) Seed and Mulch all disturbed areas along the Proposed Well Pad, including pad slopes.

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10) Grub the Proposed Existing Well Access Road.
11) Construct the Proposed Existing Well Access Road
12) Seed and Mulch all disturbed areas along the Proposed Existing Well Access Road
13) Grub The Proposed Tank Pad Access Road
14) Construct the proposed Tank Pad Access Road
15) Seed and Mulch all Disturbed areas along the Proposed Tank Pad Access Road
16) Grub the Proposed Tank Pad and place topsoil in topsoil stockpile.
17) Construct the Proposed Tank Pad
18) Seed and Mulch all disturbed areas along the Proposed Tank Pad, including pad slopes.
19) Keep all erosion and sedimentation controls in place until there is 70% growth over the entire site.

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, as well as the timeframes for establishing stabilization; and*

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 General Notes and Erosion and Sediment Control Details on sheets 3 and D1-D2 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 Construction and E&S Control General Notes and Erosion and Sediment Control Details on sheets 3 and D1-D2 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 General Notes and Erosion and Sediment Control Details on sheets 3 and D1-D2 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.

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

Antero Response:
Please refer to the "Erosion and Sediment Control Details" and "Construction and E&S Control General notes" on sheets 3 and D1-D2 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.c.1. *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 Sheet 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:
"Plan View" maps are included on sheet 7-8 of the Site Design. Specific design and layout and inspection and maintenance notes for a stabilized construction entrance are included in the "Erosion and Sediment Control Details" and "Construction and E&S Control General Notes" on sheets 3 and D1-D2.

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

Antero Response:
"Plan View" maps included on Sheets 7-8 of the Site Design locate all proposed erosion and sediment control BMPs.

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Shirley Well Pad Site

Site Design, Construction Plan, &
Erosion and Sediment Control Plans
Antero Resources Corporation
Harrison County
Union District
Latitude 39°12'44.84"
Longitude 80°31'17.05"

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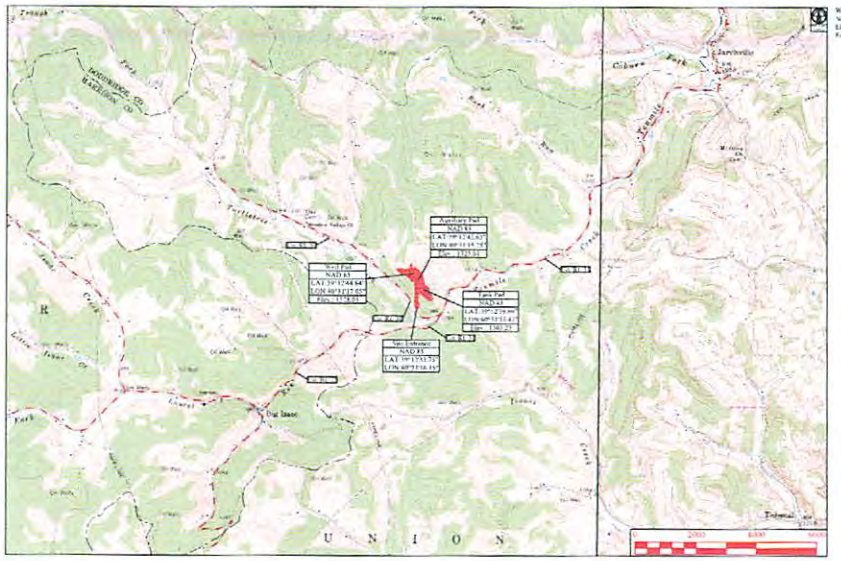
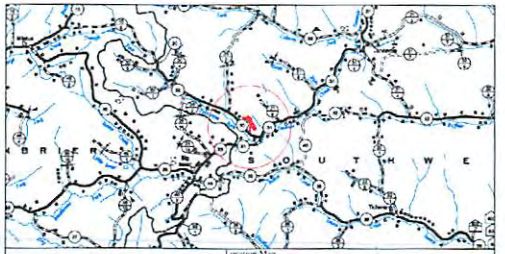


Electronic Version of Plans Can Be Viewed at: Q\OIL GAS\SAY FILES\REVIEWS



Sheet	Description
1	Cover
2	Schedule of Quantities
3	Construction and E&S Control General Notes
4	Pre-Construction Site Conditions
5	Overall Plan View
6	Erosion and Sediment Control Plan View
7-8	Plan View
9	Disturbed Area
10	Cross Sections - Well Pad
11	Cross Sections - Tank Pad
12	Cross Sections - Access Roads
D1-D2	Erosion and Sediment Control Details
R1	Site Reclamation

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811 Know what's below, Call before you dig.

Kelly Surveying PLLC
District: Union
County: Harrison
State: West Virginia

Shirley Well Pad Site
Coversheet

Date	Revision
06-10-2013	Site Design
09-26-2013	Wetland Delineation Update

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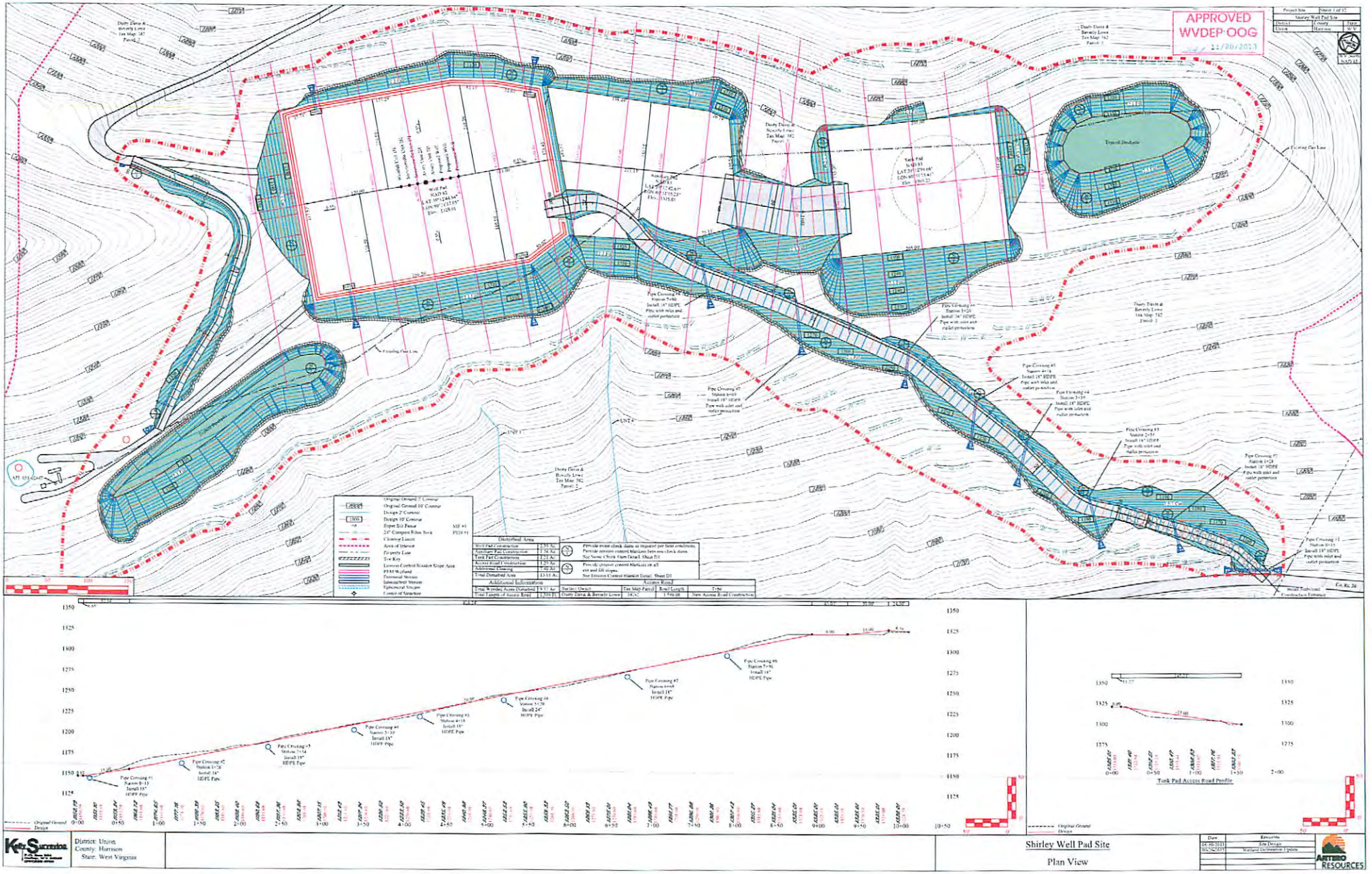
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Original Ground 2' Contour
Original Ground 10' Contour
Design 2' Contour
Design 10' Contour
Super Silt Fence
24" Compost Filter Sock
Clearing Limits
Area of Interest
Property Line
Toe Key
Erosion Control Blanket Slope Area
PFM Wetland
Perennial Stream
Intermittent Stream
Ephemeral Stream
Center of Structure
Disturbed Area
Well Pad Construction
Auxiliary Pad Construction
Tank Pad Construction
Access Road Construction
Additional Clearing
Total Disturbed Area
Additional Information
Total Wooded Access Disturbed
Total Length of Access Road
Access Road
Surface Owner
Tax Map Parcel
Road Length
Type
Dusty Davis & Beverly Lowe
New Access Road Construction
Tank Pad Access Road Profile
Original Ground
Design
Kelly Surveying
District: Union
County: Harrison
State: West Virginia
Shirley Well Pad Site
Plan View
Date
Revisions
Site Design
Wetland Delineation Update
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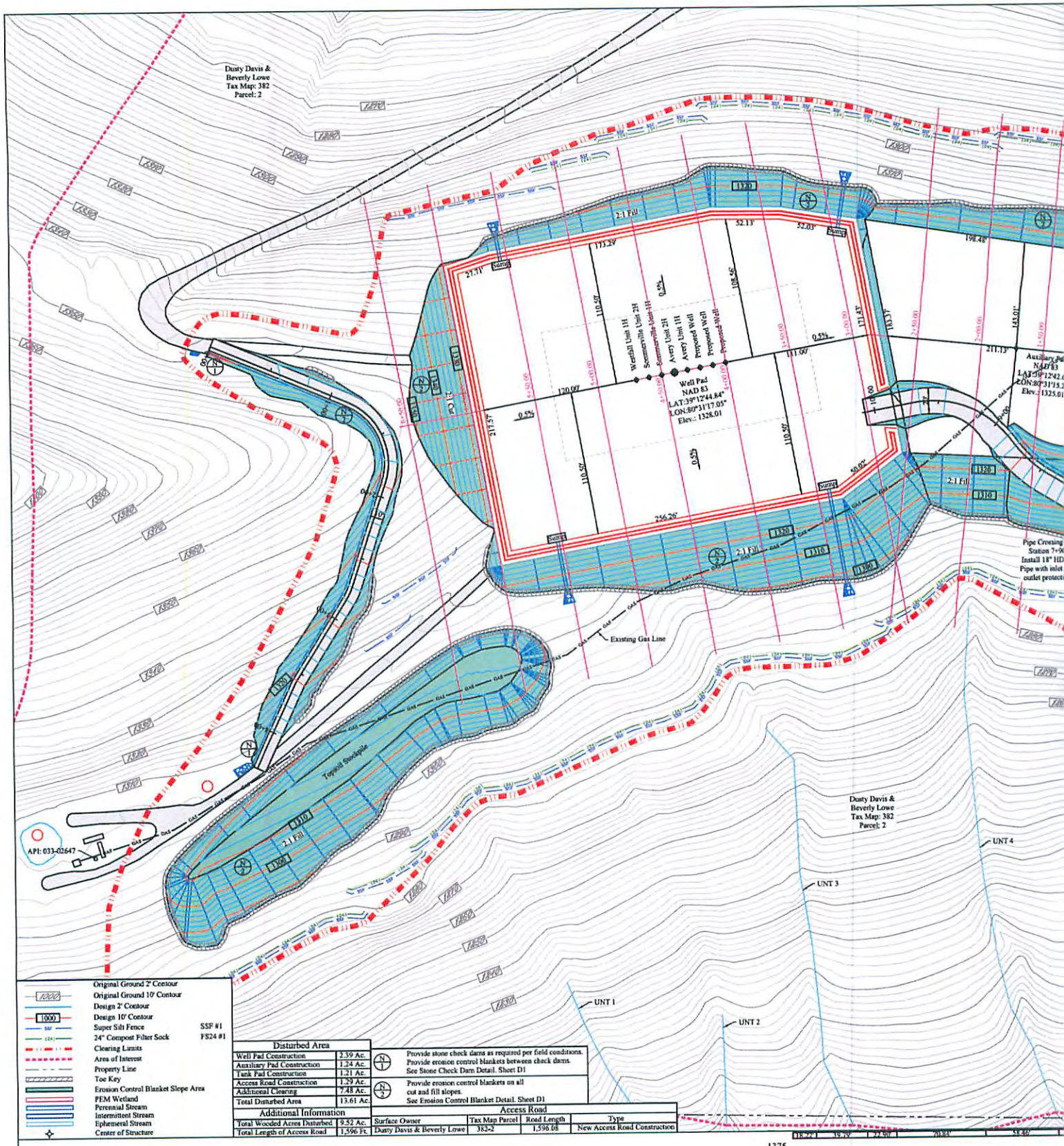


Original Ground 2' Contour	
Original Ground 10' Contour	
Design 2' Contour	
Design 10' Contour	
Super Silt Fence	SSF #1
24" Compost Filter Sock	FS24 #1
Clearing Limits	
Area of Interest	
Property Line	
Toe Key	
Erosion Control Blanket Slope Area	
PEM Wetland	
Perennial Stream	
Intermittent Stream	
Ephemeral Stream	
Center of Structure	

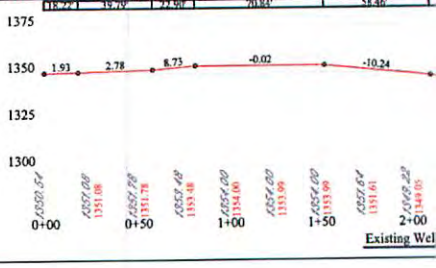
Disturbed Area	
Well Pad Construction	2.39 Ac.
Auxiliary Pad Construction	1.24 Ac.
Tank Pad Construction	1.21 Ac.
Access Road Construction	1.29 Ac.
Additional Clearing	7.48 Ac.
Total Disturbed Area	13.61 Ac.

Additional Information	
Total Wooded Acres Disturbed	9.52 Ac.
Total Length of Access Road	1,596 Ft.

N-1 Provide stone check dams as required per field conditions. Provide erosion control blankets between check dams. See Stone Check Dam Detail. Sheet D1

N-2 Provide erosion control blankets on all cut and fill slopes. See Erosion Control Blanket Detail. Sheet D1

Access Road			
Surface Owner	Tax Map Parcel	Road Length	Type
Dusty Davis & Beverly Lowe	382-2	1,596.08	New Access Road Construction



Kelly Surveying
P.O. Box 364
Shinnston, WV 26431
(304)884-4962

District: Union
County: Harrison
State: West Virginia

Project Site	Sheet 8 of 12
Shirley Well Pad Site	
District	County / State
Union	Harrison / W.V.

WV North NAD 83

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Dusty Davis & Beverly Lowe Tax Map: 382 Parcel: 2

Dusty Davis & Beverly Lowe Tax Map: 382 Parcel: 2

Tank Pad
NAD 83
LAT:39°12'39.66"
LON:80°31'13.41"
Elev.: 1303.23

Topsoil Stockpile

Existing Gas Line

Pipe Crossing #6
Station 5+20
Install 24" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #5
Station 4+18
Install 18" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #4
Station 3+39
Install 18" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #3
Station 2+34
Install 18" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #2
Station 1+28
Install 18" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #1
Station 0+15
Install 18" HDPE
Pipe with inlet and outlet protection

Pipe Crossing #7
Station 6+69
Install 18" HDPE
Pipe with inlet and outlet protection

Dusty Davis & Beverly Lowe Tax Map: 382 Parcel: 2

Co. Rt. 30

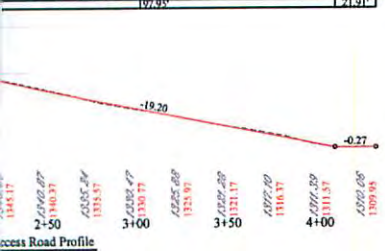
Co. Rt. 30

Site Entrance
NAD 83
LAT:39°12'33.73"
LON:80°31'16.15"
Install Stabilized Construction Entrance

UNT 6

Shirley Davis Tax Map: 382 Parcel: 7.2

0 50 100 150



Access Road Profile

0 50 100 150

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Shirley Well Pad Site

Plan View

Date:	Revisions
08-30-2013	Site Design
09-26-2013	Wetland Delineation Update

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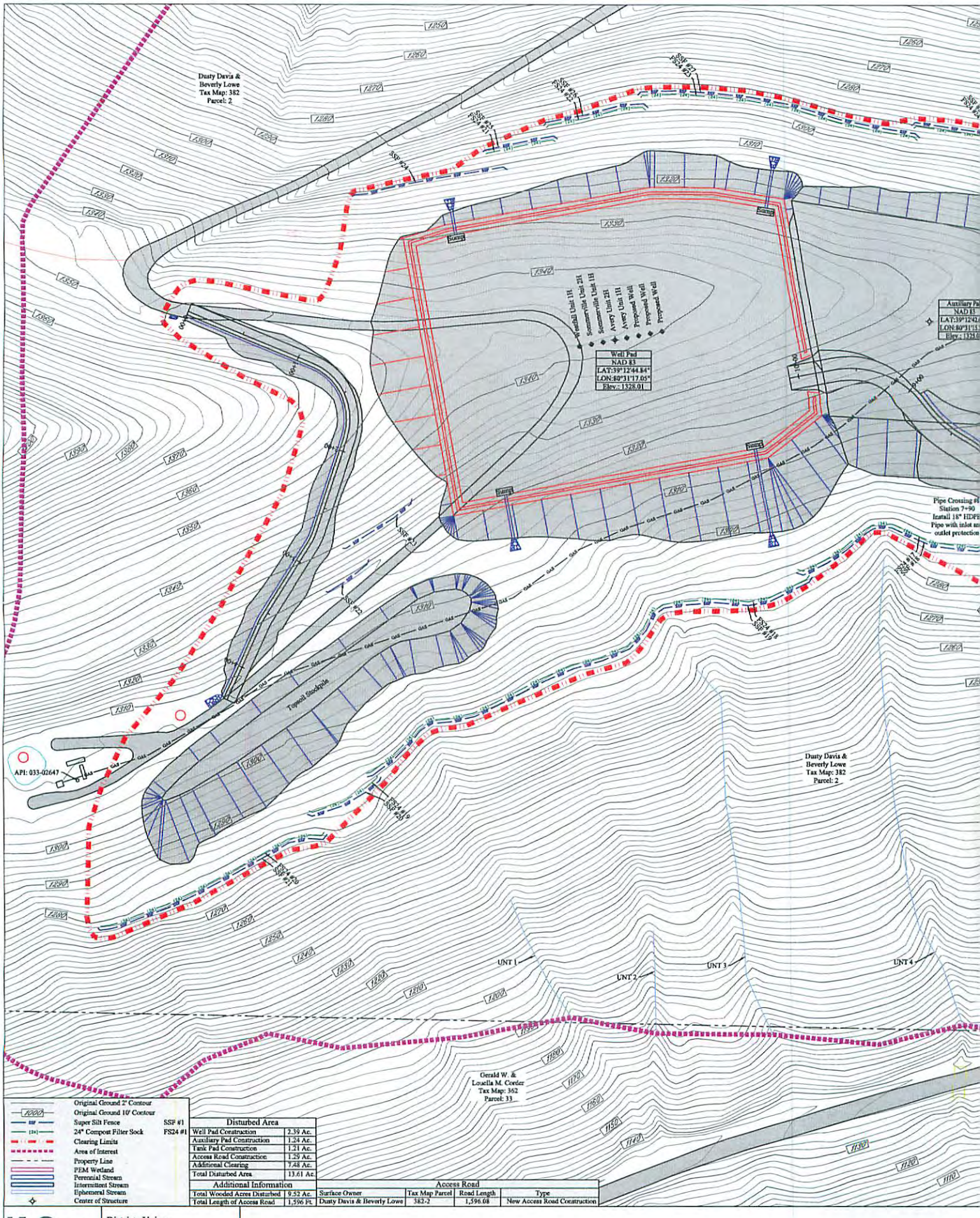

Disturbed Area	
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Access Road			
Surface Owner	Tax Map Parcel	Road Length	Type
Dusty Davis & Beverly Lowe	382-2	1,596.08	New Access Road Construction

Kelly Surveying
P.O. Box 364
Dallas, WV 26269
(304)[illegible]

District: Union
County: Harrison
State: West Virginia

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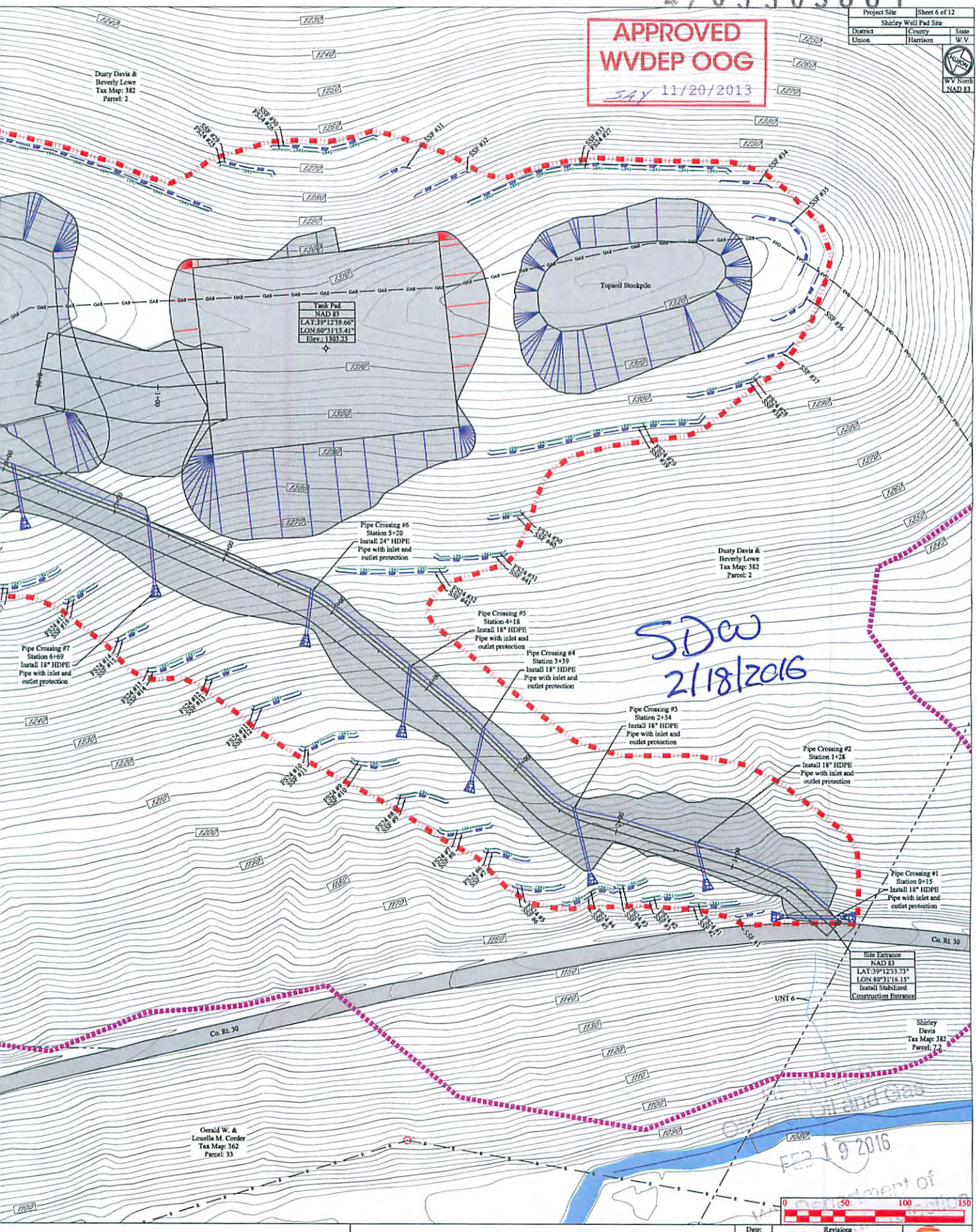
Project Site	Sheet 6 of 12
Shirley Well Pad Site	
District	County / State
Union	Harrison / W.V.

WV North NAD 83



Shirley Well Pad Site

Erosion and Sediment Control Plan View

Date:	Revisions
08-30-2013	Site Design
09-26-2013	Wetland Delineation Update

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