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west virginia department of environmental protection

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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

## PERMIT MODIFICATION APPROVAL

February 10, 2016

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET  
DENVER, CO 80202

Re: Permit Modification Approval for API Number 9502327, Well #: KLONDIKE UNIT 1H

### Extend Lateral

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Gene Smith", written over a horizontal line.

Gene Smith  
Assistant Chief of Permitting  
Office of Oil and Gas

Promoting a healthy environment.

02/12/2016



January 21, 2016

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

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Mr. Taylor Brewer  
601 57<sup>th</sup> Street  
Charleston, WV 25304

4700502327 Mod 2

Mr. Brewer:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved wells on the existing Pierpoint Pad. We are requesting to slightly extend the horizontal laterals approximately 100 feet which will change the BHLs of the Klondike Unit 1H (API# 47-095-02327) and Klondike Unit 2H (API# 47-095-02328). Please note that the new bottom hole location will be drilling through a new lease, and a revised Form WW-6A1 has been included.

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the updated BHLs and Measured Depths
- REVISED Form WW-6A1, which shows the new lease being drilled through
- REVISED Mylar Plat, which shows the new Lateral Lengths and Estimated Measured Depths

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

Thank you in advance for your consideration.

Sincerely,

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

Ashlie Steele  
Permitting Supervisor  
Antero Resources Corporation

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Office of Oil and Gas

JAN 27 2015

WV Department of  
Environmental Protection

Enclosures

02/12/2016

WW-6B  
(04/15)

API NO. 47-095 - 02327

OPERATOR WELL NO. Klondike Unit 1H

Well Pad Name: Existing Pierpoint Pad

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

1) Well Operator: Antero Resources Corporal 494488557 095 - Tyler Ellsworth Shirley 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: Klondike Unit 1H Well Pad Name: Existing Pierpoint Pad

3) Farm Name/Surface Owner: Lloyd C. Seckman Public Road Access: CR 46/1

4) Elevation, current ground: 1201' Elevation, proposed post-construction: 1201'

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

Other

(b) If Gas Shallow X Deep

Horizontal X

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 6800' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6800' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,200' MD

11) Proposed Horizontal Leg Length: 11,703'

470950-307 Mod 2

12) Approximate Fresh Water Strata Depths: 280'

13) Method to Determine Fresh Water Depths: Weigle Unit 1H (API# 47-095-02126) on same pad

14) Approximate Saltwater Depths: 770', 1591'

15) Approximate Coal Seam Depths: 896'

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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WW-6B  
(04/15)

API NO. 47- 095 - 02327

OPERATOR WELL NO. Klondike Unit 1H

Well Pad Name: Existing Pierpoint 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#	335'	335'	CTS, 465 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	19,200'	19,200'	CTS, 4872 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

4709502327 Mod 2

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							

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**PACKERS**

JAN 27 2015

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

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WW-6B  
(10/14)

API NO. 47- 095 - 02327

OPERATOR WELL NO. Klondike Unit 1H

Well Pad Name: Existing Pierpoint 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.

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

4709502327 Mod 2

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.30 existing acres

22) Area to be disturbed for well pad only, less access road (acres): 3.38 existing 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.

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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.

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
<b><u>Lloyd C. Seckman Lease</u></b>			
Lloyd C. Seckman	Antero Resources Appalachian Corporation	1/8+	0413/0763
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<b><u>Elizabeth Ann Garner Lease</u></b>			
Elizabeth A. Garner Delancey	Chesapeake Appalachia, LLC	1/8	0371/0119
Chesapeake Appalachia, LLC	Antero Resources Corporation	Notice of Agreement	0442/0615
<b><u>Thomas L. Burkhardt Lease</u></b>			
Thomas L. Burkhardt	Antero Resources Appalachian Corporation	1/8+	0400/0439
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<b><u>Joseph Sayre Lease</u></b>			
Joseph Sayre	Antero Resources Appalachian Corporation	1/8+	0395/0322
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<b><u>James C. Rymer Lease</u></b>			
James C. Rymer	Chesapeake Appalachia, LLC	1/8	0370/0534
Chesapeake Appalachia, LLC	Jay-Bee Oil and Gas, Inc.	Assignment of Oil and Gas Leases	0420/0571
Jay-Bee Oil and Gas, Inc.	Antero Resources Corporation	Assignment of Oil and Gas Leases	0453/0498
<b><u>West Virginia Division of Natural Resources Lease (TM 27-4)</u></b>			
West Virginia Division of Natural Resources	Antero Resources Corporation	1/8+	0514/0366
<b><u>Ronald G. Mercer Lease</u></b>			
Ronald G. Mercer	Antero Resources Appalachian Corporation	1/8+	0417/0741
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
<b><u>West Virginia Division of Natural Resources Lease (TM 2-27-p/o 5)</u></b>			
West Virginia Division of Natural Resources	Jay-Bee Production Company	1/8+	0485/0358
Jay-Bee Production Company	JB Exploration I, LLC	Deed of Trust	Doddridge Co. 0189/0452
JB Exploration I, LLC	Antero Resources Corporation	*Partial Assignment	0509/0757
<b><u>West Virginia Division of Natural Resources Lease (TM 2-27-p/o 5)</u></b>			
West Virginia Division of Natural Resources	Jay-Bee Production Company	1/8+	0485/0358
Jay-Bee Production Company	JB Exploration I, LLC	Deed of Trust	Doddridge Co. 0189/0452
JB Exploration I, LLC	Antero Resources Corporation	*Partial Assignment	0509/0757

4700502527 Mod 2

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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.

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b><u>Patsy Fletcher Lease</u></b>			
Patsy J. Fletcher Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0417/0696 Exhibit 1
<b><u>John H. Crumrine, et al Lease</u></b>			
Charles A. Crumrine & John W. Crumrine Drilling Appalachian Corporation Antero Resources Appalachian Corporation	Drilling Appalachian Corporation Antero Resources Appalachian Corporation Antero Resources Corporation	1/8 Assignment Name Change	0257/0521 0422/0074 Exhibit 1

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\*\*CONTINUED ON NEXT PAGE\*\*

4709502327 Mod 2

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JAN 27 2015  
WV Department of  
Environmental Protection

WW-6A1  
(5/13)

Operator's Well No. Klondike Unit 1H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
WVDNR Lease	West Virginia Division of Natural Resources	Antero Resources Corporation	1/8+	0514/0366

\*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.

4709502327 Mod 2

**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

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WV Department of  
Environmental Protection

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 VP of Production



FORM WW-6A1  
EXHIBIT 1

FILED

JUN 10 2013

Penny Barker, Manager  
IN THE OFFICE OF  
SECRETARY OF STATE  
Tel: (304)558-8000  
Fax: (304)558-8381  
Website: www.wv.gov  
E-mail: business@wv.gov.com



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

APPLICATION FOR  
AMENDED CERTIFICATE  
OF AUTHORITY

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 Med  
stamped copy returned to you)  
FEE: \$25.00

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

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: 6/26/2008

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.)  
Antero Resources Corporation  
Antero Resources Corporation  
Antero Resources Corporation

7. Signature Information (See below "Important Legal Notice Regarding Signatures")  
Print Name of Signer: Alyn A. Schopp  
Title/Capacity: Authorized Person  
Signature: [Handwritten Signature]  
Date: June 10, 2013  
Contact Name: Alyn A. Schopp  
Phone Number: (303) 367-7310

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

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Office of Oil and Gas

JAN 27 2015

WV Department of  
Environmental Protection

LATITUDE 39°27'30"

7,265'

588' TO BOTTOM HOLE

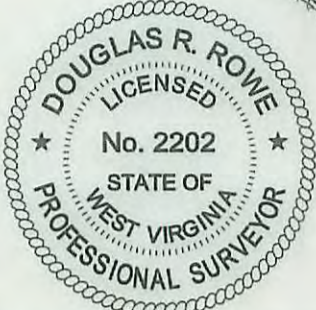
LATITUDE 39°30'00"

LONGITUDE 80°52'30"

LONGITUDE 80°50'00"

Antero Resources Corporation  
Well No. Klondike Unit 1H  
API #47-095-02327

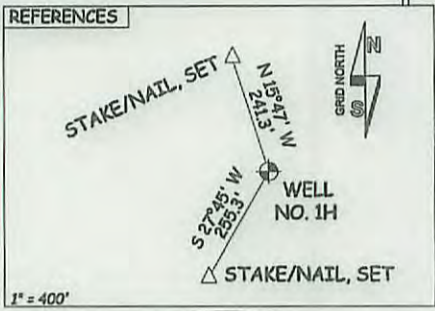
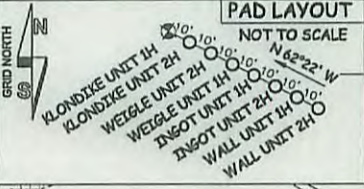
WV NORTH ZONE  
GRID NORTH



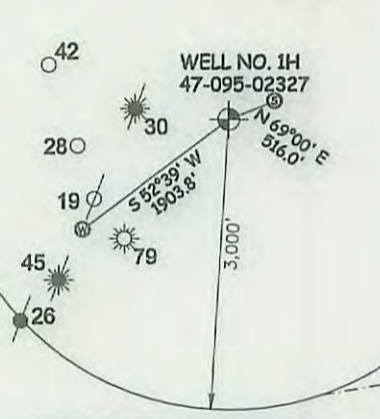
NOTES:  
NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.

NOTES:  
WELL 1H TOP HOLE INFORMATION:  
N: 349,662ft E: 1,616,241ft  
LAT: 39°27'07.41" LON: 80°51'32.62"  
BOTTOM HOLE INFORMATION:  
N: 360,053ft E: 1,611,311ft  
LAT: 39°28'49.36" LON: 80°52'37.49"  
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:  
WELL 1H TOP HOLE INFORMATION:  
N: 4,366,962m E: 512,141m  
BOTTOM HOLE INFORMATION:  
N: 4,370,103m E: 510,586m



NOTE:  
1 WATER WELL AND 1 DEVELOPED SPRING WERE LOCATED WITHIN 2000' OF PROPOSED WELL



47 - 095 - 02327 HGA  
STATE COUNTY PERMIT

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



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

JOB # 15-055WA  
DRAWING # KLONDIKE1HR2  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND  
- - - Surface Owner Boundary Lines +/-  
- - - Interior Surface Tracts +/-  
X Existing Fence  
⊕ Found monument, as noted  
DATE 01/20/16  
OPERATOR'S WELL# KLONDIKE UNIT #1H

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 1,216' ORIGINAL - 1,201' AS DRILLED WATERSHED OUTLET MIDDLE ISLAND CREEK  
QUADRANGLE SHIRLEY 7.5' (TH) MIDDLEBOURNE 7.5' (BH) DISTRICT ELLSWORTH COUNTY TYLER  
SURFACE OWNER LLOYD C. SECKMAN ACREAGE 128.5 ACRES +/-  
OIL & GAS ROYALTY OWNER LLOYD C. SECKMAN; ELIZABETH ANN GARNER; THOMAS L. BURKHART; LEASE ACREAGE 128.5 ACRES+; 90.605 ACRES+; 90 ACRES+;  
JOSEPH SAYRE, JAMES C. RYMER; WVDNR; RONALD G. MERCER; WVDNR; WVDNR; PATSY FLETCHER; JOHN H. CRUMRINE ET AL 100 AC+; 143.89 AC+; 20 AC+; 405.37 AC+; 71.74 AC+; 60 AC+; 19.6 AC+; 256 AC+  
PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER X REDRILL \_\_\_ FRACTURE OR STIMULATE X  
PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD BHL PLUG & ABANDON CLEAN OUT & REPLUG  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 19,200' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
DENVER, CO 80202 CHARLESTON, WV 25313

02/12/2016

LATITUDE 39°27'30"

-7,265'

588' TO BOTTOM HOLE

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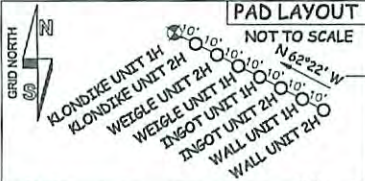
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Well No. Klondike Unit 1H  
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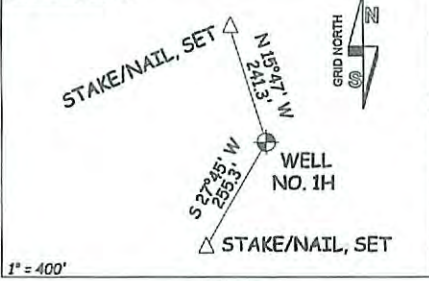
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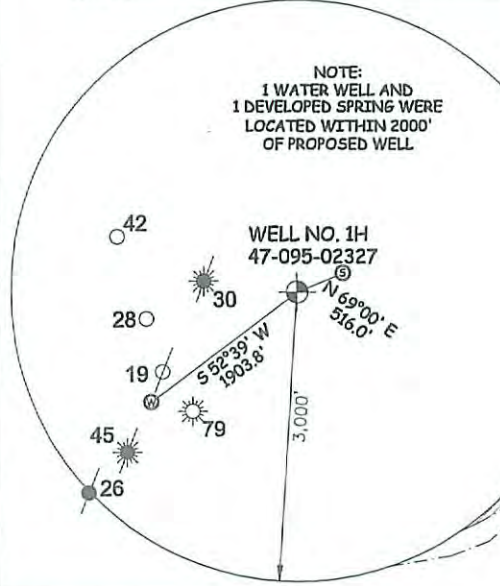
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REFERENCES



NOTE: 1 WATER WELL AND 1 DEVELOPED SPRING WERE LOCATED WITHIN 2000' OF PROPOSED WELL



47 - 095 - 02327  
STATE COUNTY PERMIT

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



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

WILLOW LAND SURVEYING PLLC  
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

JOB # 15-055WA  
DRAWING # KLONDIKE1HR2  
SCALE 1" = 1000'  
MINIMUM DEGREE OF ACCURACY SUBMETER  
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS  
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND  
- - - Surface Owner Boundary Lines +/-  
- - - Interior Surface Tracts +/-  
X Existing Fence  
⊕ Found monument, as noted  
DOUGLAS R. ROWE P.S. 2202  
DATE 01/20/16  
OPERATOR'S WELL# KLONDIKE UNIT #1H

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 1,216' ORIGINAL - 1,201' AS DRILLED WATERSHED OUTLET MIDDLE ISLAND CREEK  
QUADRANGLE SHIRLEY 7.5' (TH) MIDDLEBOURNE 7.5' (BH) DISTRICT ELLSWORTH COUNTY TYLER  
SURFACE OWNER LLOYD C. SECKMAN ACREAGE 128.5 ACRES +/-  
OIL & GAS ROYALTY OWNER LLOYD C. SECKMAN; ELIZABETH ANN GARNER; THOMAS L. BURKHART; LEASE ACREAGE 128.5 ACRES +/-; 90.605 ACRES +/-; 90 ACRES +/-  
JOSEPH SAYRE; JAMES C. RYMER; WVDNR; RONALD G. MERCER; WVDNR; WVDNR; PATSY FLETCHER; JOHN H. CRUMRINE ET AL. 100 AC +/-; 143.89 AC +/-; 20 AC +/-; 405.37 AC +/-; 71.74 AC +/-; 60 AC +/-; 19.6 AC +/-; 258 AC +/-  
PROPOSED WORK: DRILL \_\_\_ CONVERT \_\_\_ DRILL DEEPER X REDRILL \_\_\_ FRACTURE OR STIMULATE X  
PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL  
(SPECIFY) MOD BHL PLUG & ABANDON CLEAN OUT & REPLUG  
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,800' TVD 19,200' MD  
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM  
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD  
DENVER, CO 80202 CHARLESTON, WV 25313

02/12/2016

RECEIVED  
Office of Oil and Gas  
JAN 27 2015  
WV Department of Environmental Protection