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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Monday, December 11, 2017  
WELL WORK PERMIT  
Vertical / Plugging

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for 6012  
47-091-00159-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin  
Chief

Operator's Well Number: 6012  
Farm Name: HARR  
U.S. WELL NUMBER: 47-091-00159-00-00  
Vertical / Plugging  
Date Issued: 12/11/2017

Promoting a healthy environment.

12/15/2017

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9100159P

## PERMIT CONDITIONS

West Virginia Code §22-6-11 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

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

12/15/2017

Form WW-4 (B)  
Permit Copy  
(Rev 2/01)

Date: October 23, 2017  
Operator's Well \_\_\_\_\_  
Well No. 606012 (Harr #6012)  
API Well No.: 47 091 - 00159

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

**APPLICATION FOR A PERMIT TO PLUG AND ABANDON**

4) Well Type: Oil \_\_\_\_\_ Gas X Liquid Injection \_\_\_\_\_ Waste Disposal \_\_\_\_\_  
If Gas, Production \_\_\_\_\_ X Or Underground storage \_\_\_\_\_ Deep \_\_\_\_\_ Shallow X

5) Elevation: 1402 ft. Watershed: Plummer Run  
Location: Booths Creek County: Taylor Quadrangle: Rosemont 7.5'  
District: \_\_\_\_\_

6) Well Operator EQT Production Company  
120 Professional Place  
Address: Bridgeport, WV 26330

7) Designated Agent: Rex C. Ray  
Address: 120 Professional Place  
Bridgeport, WV 26330

8) Oil & Gas Kenneth Greynolds  
Name: 613 Broad Run Road  
Address: Jane Lew, WV 26378

9) Plugging Contractor:  
Name: HydroCarbon Well Service  
Address: PO BOX 995  
Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:  
**See Attachment for details and procedures.**

Ch# 21585  
Amt \$100.<sup>00</sup>  
Date 10/20/17

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Environmental Protection

OK g.w.m

OFFICE USE ONLY

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector \_\_\_\_\_

Date \_\_\_\_\_

## PLUGGING PROGNOS

606012  
 J.M.Harr  
 API# 47-091-00159  
 District, Booths Creek  
 Taylor County, WV

BY: R Green  
 DATE: 10/14/17

**CCURRENT STATUS:**

**TD @ 2286'**  
**Elevation @ 1401'**

10" casing @ 205'  
 8 1/4" casing @ 835'  
 6 5/8" casing @ 1251'

**Fresh Water** 100', & 470'  
**Saltwater** @ None Reported  
**Oil Show** @ None Reported  
**Gas shows** @ 2196' (Fifth Sand)  
**Coal** @ None Reported

1. Notify inspector, Kenneth Greynolds, @ 304-206-6613, 24 hrs. prior to commencing operations.
2. TIH and check TD @ or below 2200'.
3. TIH to 2200', spot 30 bbl. of 6% gelled water followed by a 200' C1A cement plug. 2200' to 2000', (Gas Show @ 2196')
4. WOC 8 hrs. , Tag TOC, add additional C1A cement if necessary.
5. TOOH to 1450' set 350' C1A cement plug 1450' to 1100', (Elevation & 6 5/8" casing seat).
6. Free point 6 5/8" casing, cut casing @ free point, TOOH 6 5/8" casing.
7. Set 100' C1A cement plug 50' in/out of casing cut, perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
8. TOOH to 900', set 200' C1A cement plug, 900' to 700', (8 1/4" casing seat).
9. Free point 8 1/4" casing, cut casing @ free point, TOOH 8 1/4" casing.
10. Set 100' C1A cement plug 50' in/out of casing cut, perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
11. TOOH to 500', set 100' C1A cement plug 500' to 400'.(Water @ 470')
12. TOOH to 250', set 100' C1A cement plug, 250' to 150', (10" casing seat).
13. Free point 10" casing, cut casing @ free point, TOOH 10" casing.
14. Set 100' C1A cement plug 50' in/out of casing cut, perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
15. \* Note if unable to cut and pull 10" casing .TIH wireline and perforate 10" casing with 4 holes each @ 100', 75', & 50'.TIH to 150', set 150' C1A cement plug 150' to surface.
16. Erect monument with API#, date plugged, & company name.
17. Reclaim location and road to WV-DEP specifications.

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OK  
 J.M.H.

12/15/2017



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL RECORD

Permit No. \_\_\_\_\_ Oil or Gas Well "GAS"  
(min)

Company Pittsburgh & West Va. Gas Company.

Address Clarksburg, West Va.

Farm J. Minor Harr Acres \_\_\_\_\_

Location (waters) Fairmont S/W. 2-4

Well No. 6012 Elev. \_\_\_\_\_

District Booths Creek County Taylor

The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_

Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_

Drilling commenced November 8th, 1915

Drilling completed December 20th, 1915

Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

With \_\_\_\_\_

Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch

Volume \_\_\_\_\_ Cu. Ft.

Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.

Oil \_\_\_\_\_ bbls., 1st 24 hrs.

Fresh water \_\_\_\_\_ feet \_\_\_\_\_ foot

Salt water \_\_\_\_\_ feet \_\_\_\_\_ foot

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			
10	205'	205'	Size of
8 1/2	835'	835'	
6 3/4	1251'	1251'	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_

COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lay	Yellow	Soft	0	7			
and	"	"	7	27			
late	Dark	"	27	77			
lime	White	Hard	77	202	Water	100'	
late	Dark	Soft	202	305			
and	White	"	305	370			
late	Dark	"	370	395			
and	White	Hard	395	420	Water	170'	
lime	"	"	420	460			
Big Dunkard	"	"	460	480			
late	Dark	Soft	480	525			
as Sand	White	Hard	525	545			
lime	Dark	"	545	565			
late	"	Soft	565	585			
st. Salt Sand	White	Hard	585	620			
late	Dark	Soft	620	645			
lime	"	Hard	645	675			
nd. Salt Sand	White	"	675	750			
late	Dark	Soft	750	772			
rd. Salt Sand	White	Hard	772	825			
late	Dark	Soft	825	850			
lime	"	Hard	850	870			
axxon Sand	White	"	870	910			
ed Rock	Red	Soft	910	980			
lime	White	Hard&Soft	980	1080			
ed Rock	Red	"	1080	1160			
late	White	Soft	1160	1180			
ittle Lime	"	Hard	1180	1190			
late	Dark	Soft	1190	1215			
lime (Big)	"	Hard	1215	1316			
Big Injun	Light	"	1316	1411			
late&Shells	Dark	Hard&Soft	1411	1643			
sandy Lime		Hard	1643	1672			
late&Shells	Dark	Hard&Soft	1672	1755			
50 Ft. Sand	Light	Hard	1755	1790			
late	Dark	Soft	1790	1793			
30 Ft. Sand	Light	Hard	1793	1831			
late	Dark	Soft	1831	1837			
lime	"	Hard	1837	1850			

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Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
late	Dark	Soft	1850	1862			
and	Light	Hard	1862	1880			
late&Shells	Dark	Hard&Soft	1880	1920			
ed Rock & Shells	Red	Soft	1920	1942			
ime & Sand	Light	Hard	1942	1960			
late&Shells	"	Hard&Soft	1960	1980			
ed Rock Shells	Red	" "	1980	2055			
th.Sand	Soft		2055	2067			
ed Rock Shells	Red		2067	2194			
th.Sand	Brown	Soft&Hard	2194	2221	Gas	2196'	
ed Rock		Soft	2221	2225			
late	Dark	Soft	2225	2231			
yard Sand	"	Hard	2231	2259			
late	White	Soft	2259	2265			
ime	"	Hard	2265	2275			
late	"	Soft	2275	2286			
otal Depth	.....			2286			

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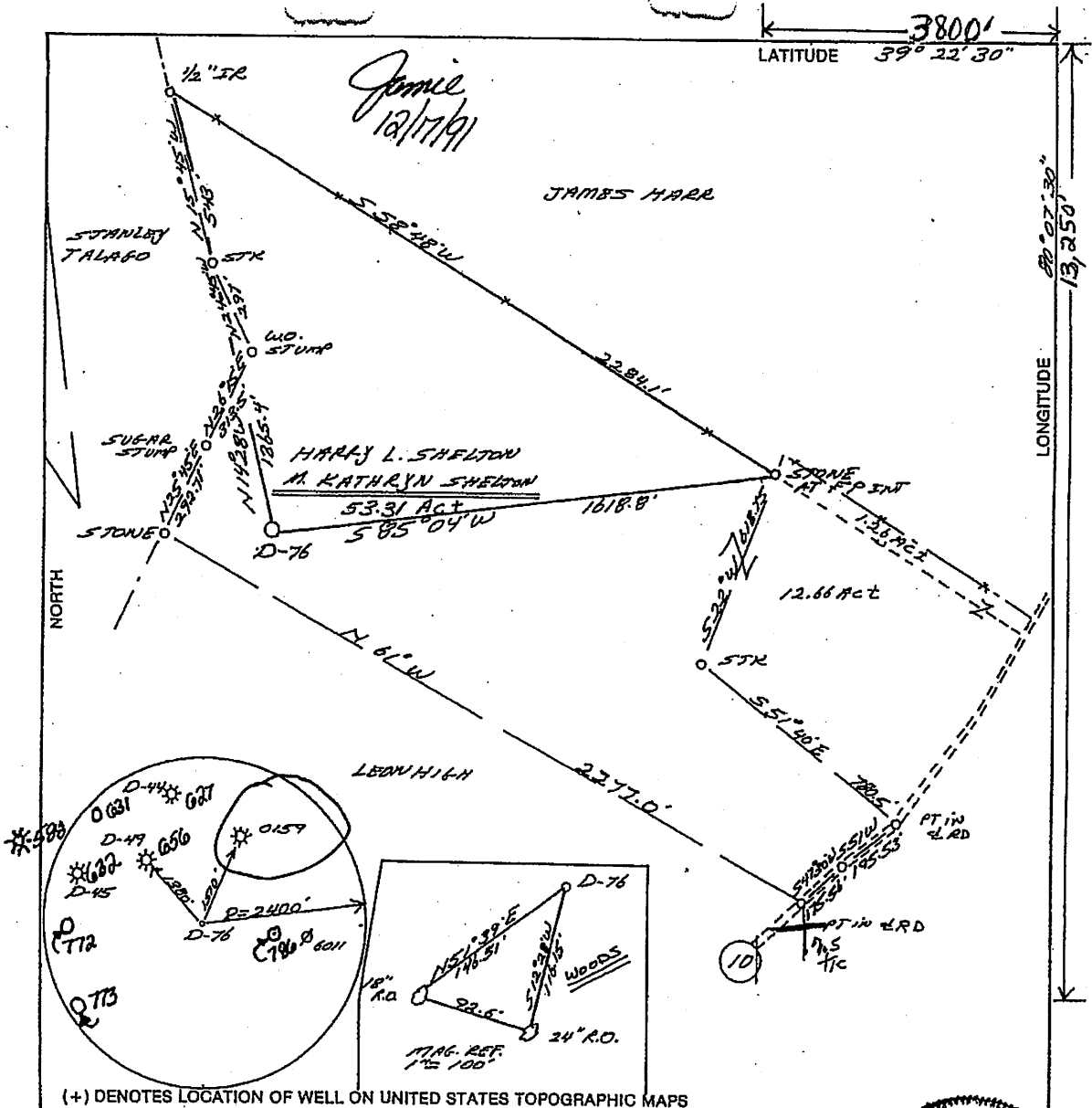
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Date November 22, 1946, 19

APPROVED PITTSBURGH & WEST VA GAS COMPANY, Owner

By \_\_\_\_\_ (Title) 12/15/2017

9100159P



OPERATORS WELL NO. 60/2  
 API WELL NO. 47-091-00159

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

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

LOCATION: ELEVATION 1420' est WATER SHED Plummer Run  
 DISTRICT Booths Creek COUNTY Taylor  
 QUADRANGLE Rosemont

SURFACE OWNER \_\_\_\_\_ ACREAGE \_\_\_\_\_  
 OIL & GAS ROYALTY OWNER Harr LEASE ACREAGE \_\_\_\_\_  
 LEASE NO. \_\_\_\_\_

PRODUCING FORMATION \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

WELL OPERATOR Equitrans DESIGNATED AGENT \_\_\_\_\_

ADDRESS \_\_\_\_\_ ADDRESS \_\_\_\_\_

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 Environmental Protection

Rosemont 12/15/2017

9100159 P

WW-4-A  
Revised 6/07

1) Date: October 23, 2017  
2) Operator's Well Number  
606012 (Harr #6012)  
3) API Well No.: 47 091 - 00159  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT**  
**DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS**  
**NOTICE AND APPLICATION TO PLUG AND ABANDON WELL**

4) Surface Owner(s) to be served:  
(a) Name Ronald and Jenny Carder  
Address 912 Harmony Grove Road  
Grafton, WV 26354  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Kenneth Greynolds  
Address 613 Broad Run Road  
Jane Lew, WV 26378  
Telephone (304) 206-6613

5) (a) Coal Operator: \_\_\_\_\_  
Name Arch Coal  
Address Ark Land Northern Appalachia  
100 Tygart Drive  
Grafton, WV 26354  
(b) Coal Owner(s) with Declaration  
Name Arch Coal  
Address Ark Land Northern Appalachia  
100 Tygart Drive  
Grafton, WV 26354  
(c) Coal Lessee with Declaration  
Name Arch Coal  
Address Ark Land Northern Appalachia  
100 Tygart Drive  
Grafton, WV 26354

**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
  - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator: EQT Production Company  
By: Victoria J. Roark  
Its: Permitting Supervisor  
Address: PO Box 280  
Bridgeport, WV 26330  
Telephone: (304) 848-0076

Subscribed and sworn before me this 20th day of October, 2017  
Misty S. Christie Notary Public  
My Commission Expires: 2/20/18

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OCT 24 2017  
WV Department of  
Environmental Protection

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



**Misty S. Christie**  
1207 Brierclyff Rd  
Bridgeport, WV 26330  
My Commission Expires February 20, 2018

12/15/2017



9100159P

WW-9  
Revised 5/16

Page \_\_\_\_ of \_\_\_\_  
2) Operator's Well Number  
**606012 (Harr #6012)**  
3) API Well No.: 47 091 - 00159

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**OFFICE OF OIL & GAS**  
**FLUIDS / CUTTINGS DISPOSAL & RECLAMATION PLAN**

Operator Name: EQT PRODUCTION COMPANY OP CODE: \_\_\_\_\_

Watershed (HUC 10): Plummer Run Quadrangle: Rosemont 7.5'

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

Will a pit be used? Yes X No \_\_\_

If so, please describe anticipated pit waste: \_\_\_\_\_

**Formation Fluids**

Will a synthetic liner be used in the pit? Yes X No \_\_\_ Is so, what ml.? 20 10 ml

Proposed Disposal Method for Treated Pit Wastes:

- \_\_\_\_\_ Land Application (if selected provide a completed form WW-9-GPP)
- \_\_\_\_\_ Underground Injection (UIC Permit Number \_\_\_\_\_)
- X Reuse (at API Number -- Various \_\_\_\_\_)
- X Off Site Disposal Permit (Supply form WW-9 for disposal location. See attachment)
- \_\_\_\_\_ Other: (Explain \_\_\_\_\_)

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

Drilling medium anticipated for this well? (vertical and horizontal)? Air, freshwater, oil based, etc. \_\_\_\_\_

If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, remove offsite, etc. \_\_\_\_\_

If left in pit and plan to solidify what medium will be used? (cement, Lime, sawdust) \_\_\_\_\_

Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of the Oil and Gas of any load of drill cuttings or associated waste rejected at a 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 April 1, 2016, by the Office of Oil and Gas of the West Virginia Division 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.

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 *Victoria J. Roark*

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor - WV

Subscribed and sworn before me this 20th day of October, 2017

My Commission Expires 2/20/18

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OCT 24 2017  
WV Department of  
Environmental Protection

*Misty S. Christie*

Notary Public  
OFFICIAL SEAL  
STATE OF WEST VIRGINIA  
NOTARY PUBLIC  
Misty S. Christie  
12/15/2017  
1207 Briercliff Rd  
Bridgeport, WV 26330  
My Commission Expires February 20, 2018

**LEGEND**

Property Boundary		Diversion	
Road		Spring	
Planned Fence		Drain Pipe with size in inches	
Existing Fence		Stream	
Open Ditch		Artificial Filter Strip	
North		Building	
		Water well	
Pit with Cut Walls		Pit with Compacted Walls	
		Area of Land Application of Pit Waste	

Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH           

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 ton lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed.

**SEED MIXTURES**

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

**ATTACH:**  
Drawing(s) of road, location, pit and proposed area for land application.  
Photocopies section of involved 7.5' topographic sheet.

Plan approved by: \_\_\_\_\_

Comments: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_  
Field Reviewed?        Yes        No

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**EQT Production Water plan**  
**Offsite disposals**

**Waste Management - Meadowfill Landfill**

Rt. 2, Box 68 Dawson Drive  
Bridgeport, WV 26330  
304-326-6027  
Permit #SWF-1032-98  
Approval #100785WV

**Waste Management - Northwestern Landfill**

512 E. Dry Road  
Parkersburg, WV 26104  
304-428-0602  
Permit #SWF-1025 WV-0109400  
Approval #100833WV

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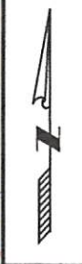
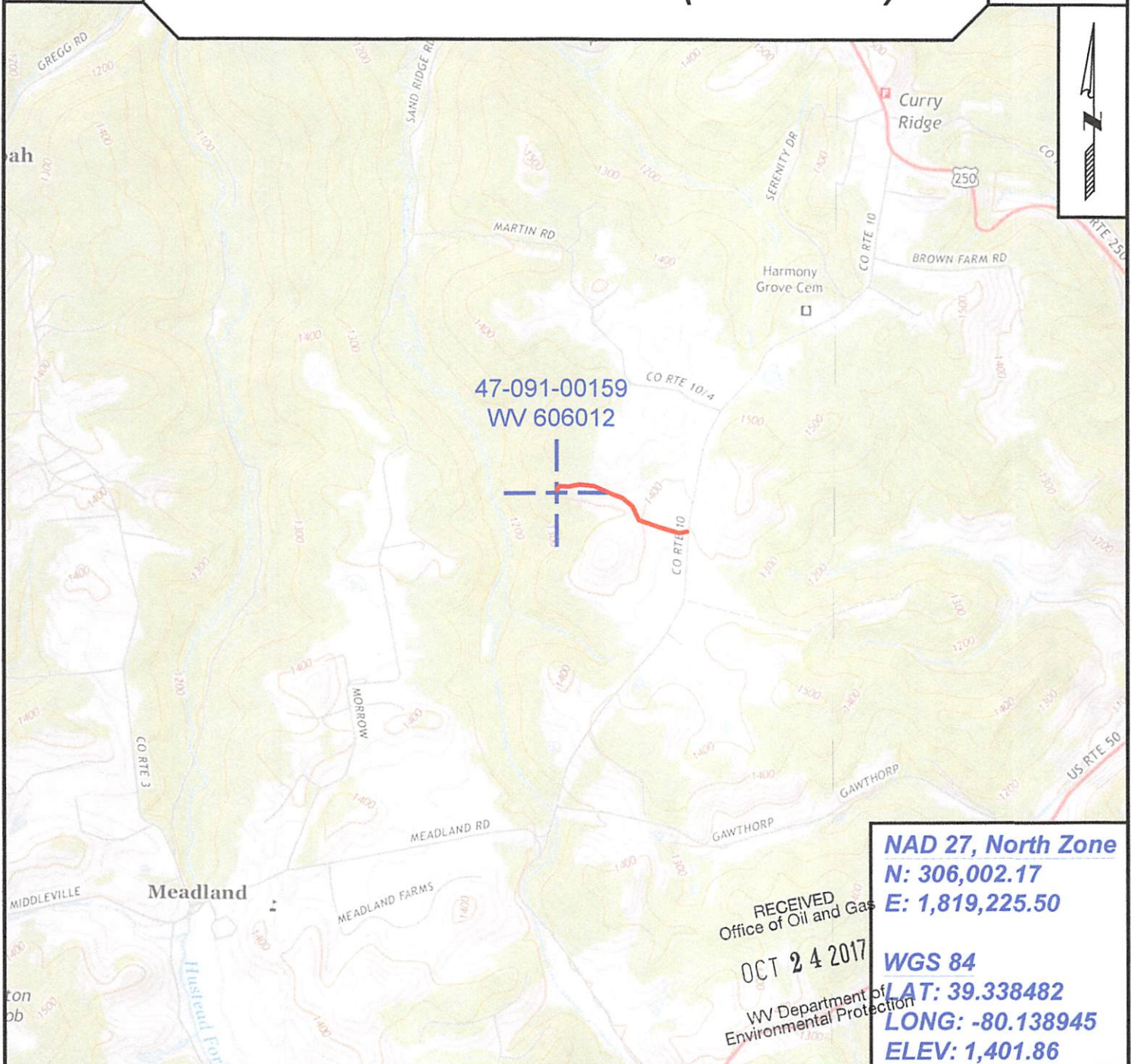
12/15/2017

9100159P

Topo Quad: Rosemont 7.5' Scale: 1" = 2000'  
 County: Taylor Date: October 6, 2017  
 District: Booths Creek Project No: 206-13-00-16

# 47-091-00159 WV 606012 (Harr #6012)

Topo



47-091-00159  
 WV 606012

**NAD 27, North Zone**  
**N: 306,002.17**  
**E: 1,819,225.50**

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 OCT 24 2017

**WGS 84**  
**LAT: 39.338482**  
**LONG: -80.138945**  
**ELEV: 1,401.86**

WV Department of  
 Environmental Protection



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**  
 1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330

12/15/2017

9100159P

Topo Quad: Rosemont 7.5' Scale: 1" = 500'

County: Taylor Date: October 6, 2017

District: Booths Creek Project No: 206-13-00-16

Highway

47-091-00159 WV 606012 (Harr #6012)

Pit Location Map






47-091-00159  
WV 606012

Existing Well  
Access Road

Plummer Run



**LEGEND**

-  Proposed Pit Location
-  Pit-Compacted Walls
-  Area of Land Application of Pit Waste

**NAD 27, North Zone**  
N: 306,002.17  
E: 1,819,225.50

**WGS 84**  
LAT: 39.338482  
LONG: -80.138945  
ELEV: 1,401.86



SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

1-800-482-8606  
237 Birch River Road  
Birch River, WV 26610  
PH: (304) 649-8606  
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**

P.O. Box 280  
Bridgeport, WV 26330

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9100159P

Topo Quad: Rosemont 7.5' Scale: 1" = 200'

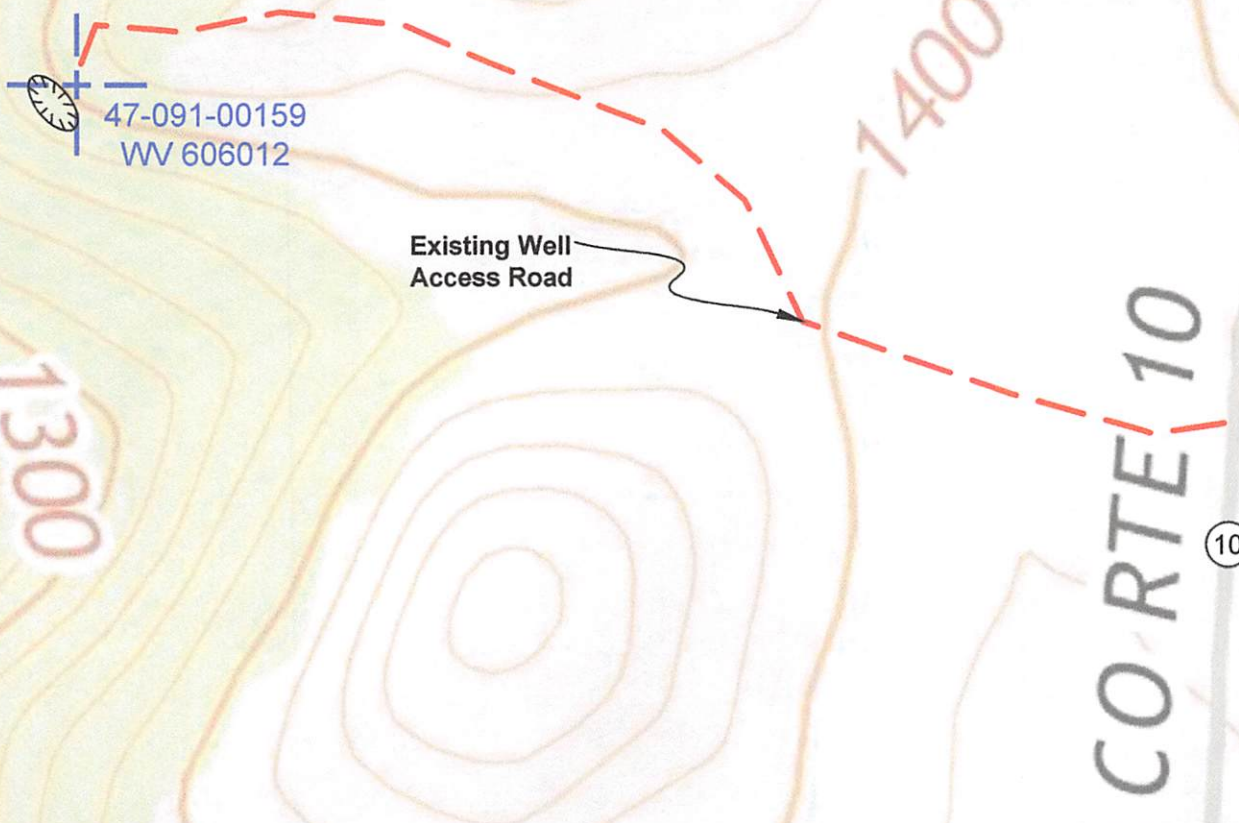
County: Taylor Date: October 6, 2017

District: Booths Creek Project No: 206-13-00-16




# 47-091-00159 WV 606012 (Harr #6012)

Topo

## Pit Location Map



### LEGEND

-  Proposed Pit Location
-  Pit-Compacted Walls
-  Area of Land Application of Pit Waste

**NAD 27, North Zone**  
**N: 306,002.17**  
**E: 1,819,225.50**

**WGS 84**  
**LAT: 39.338482**  
**LONG: -80.138945**  
**ELEV: 1,401.86**



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 Birch River, WV 26610  
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PREPARED FOR:  
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 P.O. Box 280  
 Bridgeport, WV 26330

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 12/15/2017

9100159 A

Topo Quad: Rosemont 7.5' Scale: 1" = 2000'

County: Taylor Date: October 6, 2017

District: Booths Creek Project No: 206-13-00-16

Water

# 47-091-00159 WV 606012 (Harr #6012)

1 Potential Water Source within 1000'

47-091-00159  
WV 606012



Site 1



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**NAD 27, North Zone**  
**N: 306,002.17**  
**E: 1,819,225.50**

**WGS 84**  
**LAT: 39.338482**  
**LONG: -80.138945**  
**ELEV: 1,401.86**



SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

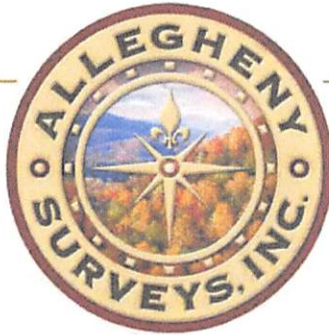
1-800-482-8606  
237 Birch River Road  
Birch River, WV 26610  
PH: (304) 649-8606  
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**

P.O. Box 280  
Bridgeport, WV 26330

12/15/2017



### POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY  
LEASE NAME AND WELL No. Harr #6012 WV 606012 47-091-00159

#### POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 944 +/- Owner: Ronald & Jenny Carder  
Address: 912 Harmony Grove Rd., Grafton, WV 26354 Phone No. \_\_\_\_\_  
Comments: \_\_\_\_\_

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Office of Oil and Gas  
OCT 24 2017  
WV Department of  
Environmental Protection

**BIRCH RIVER OFFICE**  
237 Birch River Road  
Birch River, WV 26610  
phone: 304-649-8606  
fax: 304-649-8608

**BRIDGEPORT OFFICE**  
172 Thompson Drive  
Bridgeport, WV 26330  
phone: 304-848-5035  
fax: 304-848-5037

**ALUM CREEK OFFICE**  
P.O. Box 108 • 1413 Childress Rd  
Alum Creek, WV 25003  
phone: 304-756-2949  
fax: 304-756-2948

**MARTINSBURG OFFICE**  
25 Lights Addition Drive  
Martinsburg, WV 25404  
phone: 304-901-2162  
fax: 304-901-2182



WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas  
**WELL LOCATION FORM: GPS**

API: 47-091-00159 WELL NO.: WV 606012 (Harr #6012)

FARM NAME: J. M. Harr

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Taylor DISTRICT: Booths Creek

QUADRANGLE: Rosemont 7.5'

SURFACE OWNER: Ronald & Jenny Carder

ROYALTY OWNER: James F. Jackson, et al.

UTM GPS NORTHING: 4354693

UTM GPS EASTING: 574204 GPS ELEVATION: 427 m (1402 ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS \_\_\_\_\_ : Post Processed Differential \_\_\_\_\_

Real-Time Differential \_\_\_\_\_

Mapping Grade GPS X : Post Processed Differential X

Real-Time Differential \_\_\_\_\_

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

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Office of Oil and Gas

OCT 24 2017

WV Department of  
Environmental Protection

[Signature]  
Signature

PS # 2180  
Title

10/10/17  
Date

Delivering Department  
 Auction  
 280  
 I, WV 26330

91100159P

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ronald and Jenny Carder  
 912 Harmony Grove Road  
 Grafton, WV 26354

Plugging Permit #606012



9590 9402 1319 5285 9082 01

2. Article Number (Transfer from service label)

7016 2070 0001 0947 9793

A. Signature  Agent  Addressee

X

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type

<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery
<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Return Receipt for Merchandise
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation™
<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery
<input type="checkbox"/> All Restricted Delivery	

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

City, St. \_\_\_\_\_  
 Street \_\_\_\_\_  
 Plugging Permit #606012

Sent to: 912 Harmony Grove Road  
 Grafton, WV 26354

Total P. \$ \_\_\_\_\_  
 Ronald and Jenny Carder

Postage \$ \_\_\_\_\_

Extra Services & Fees (check box, add fee as appropriate) \$ \_\_\_\_\_

Certified Mail Fee \$ \_\_\_\_\_

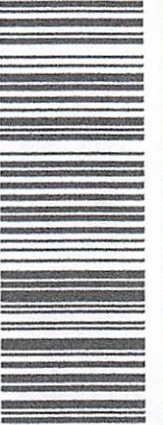
Postmark Here

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

U.S. Postal Service™  
 CERTIFIED MAIL® RECEIPT  
 Domestic Mail Only

Ronald and Jenny Carder  
 912 Harmony Grove Road  
 Grafton, WV 26354  
 Plugging Permit #606012

7016 2070 0001 0947 9793  
 7016 2070 0001 0947 9793



RETURN SERVICE REQUESTED

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 OCT 24 2017  
 WV Department of Environmental Protection



neopost™  
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 US POSTAGE

ZIP 26330  
 041L1022889

\$0.77 10  
 12/15/2017



- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Arch Coal  
Ark Land Northern Appalachia  
100 Tygart Drive  
Grafton, WV 26354

Plugging Permit #606012



9590 9402 1319 5285 9081 95

2. Article Number

7016 2070 0001 0947 9786

PS Form 3811, July 2015 PSN 7530-02-000-9053

A. Signature  Agent  
 Addressee

**X**

B. Received by (Printed Name) \_\_\_\_\_ C. Date of Delivery \_\_\_\_\_

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type

<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery
<input checked="" type="checkbox"/> Certified Mail Restricted Delivery on Delivery	<input type="checkbox"/> Return Receipt for Merchandise
<input type="checkbox"/> Certified Mail Restricted Delivery on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation™
<input type="checkbox"/> Insured Mail	<input type="checkbox"/> Signature Confirmation Restricted Delivery
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	

Domestic Return Receipt

9100599

ing Department  
for  
WV 26330

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Arch Coal  
Ark Land Northern Appalachia  
100 Tygart Drive  
Grafton, WV 26354

Plugging Permit #606012

Postage

Extra Services & Fees (check box, add fee as appropriate)	\$
Return Receipt (hardcopy)	\$
Return Receipt (electronic)	\$
Certified Mail Restricted Delivery	\$
Adult Signature Required	\$
Adult Signature Restricted Delivery	\$

Certified Mail Fee

Postmark Here

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041410228892

\$07.10  
12/15/2017

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