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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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, January 3, 2019  
WELL WORK PLUGGING PERMIT  
Horizontal Plugging

PDC MOUNTAINEER LLC  
POST OFFICE BOX 26  
120 GENESIS BOULEVARD  
BRIDGEPORT, WV 26330

Re: Permit approval for COALTRAIN 2HM  
47-091-01201-00-00

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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: COALTRAIN 2HM  
Farm Name: PATRIOT MINING COMPANY  
U.S. WELL NUMBER: 47-091-01201-00-00  
Horizontal Plugging  
Date Issued: 1/3/2019

H

47-091-01201 P  
01/04/2019

## 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.

1) Date September 21, 2018 **01/04/2019**  
2) Operator's  
Well No. Coaltrain #2hm  
3) API Well No. 47-091 -01201

STATE OF WEST VIRGINIA  
DEPARTMENT 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 \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow \_\_\_

5) Location: Elevation 1273' Watershed Sand Lick Run  
District Courthouse County Taylor Quadrangle Grafton 7.5'

6) Well Operator PDC Mountaineer, LLC 7) Designated Agent William Veigel  
Address POST OFFICE BOX 26 Address 65 PROFESSIONAL PLACE STE 200  
Bridgeport, WV 26330 BRIDGEPORT, WV 26330

8) Oil and Gas Inspector to be notified Name Kenneth Greynolds  
Address 613 Broad Run Road  
Jane Lew WV 26378  
9) Plugging Contractor Name Patchwork Oil & Gas, LLC  
Address PO Box 168  
Davisville, WV 26142

10) Work Order: The work order for the manner of plugging this well is as follows:

Work order attached.

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Office of Oil and Gas

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Environmental Protection

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

Work order approved by inspector *Kenneth Greynolds* Date 10-26-18

Work Order Attachment

47-091-01201

Coaltrain #2hm

***Run Bond log when necessary to find cement top. Gel spacers in between all cement plugs.***

1. Prepare plugging permit application.
2. Certify to surface and coal owners as necessary.
3. Certify and/or email to designated State inspector for signature.
4. Once all signatures are obtained, copy for our records and certify at the state level for approval.
5. Receive plugging permit good for 2 years.
6. Notify the designated State inspector 24 hours prior to commencing operations.
7. Move rig and equipment to location.
8. Verify total depth of 2665’.
9. Attempt to clean out well bore, pull rods & tubing, if necessary.
10. Run tubing to TD and fill entire hole with cement to surface.
11. Set 3’ high x 7’’ casing with concrete; add API for identification.
12. RDMO
13. Reclaim location.
14. Prepare WR-34 & WR-35 for permit release.

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After reviewing the drilling reports, it looks like the well was left with intermediate casing set. Below is a quick summary:

- Well Spud 12/19/2011
- Casing Depths
  - **Butch's set 20" conductor to 40'.**
    - Conductor was grouted with ready-mix cement
  - **17.5" hole drilled on air to 480'. 13-3/8", 54.5#, J-55 surface casing set at 470'.**
    - Allied cemented the surface casing. No issues
  - **12.25" hole drilled on air to 2,820'MD. 9-5/8", 36#, J-55 intermediate casing set at 2,813'.**
    - They attempted to cement with Allied, but the casing shoe was plugged.
      - They perforated with Blue Dot from 2,800' to 2,803'.
        - 10 holes, 0.35" holes
      - They attempted to cement through these perforations, could not circulate and loaded casing full of cement.
      - It appears they moved the rig off and then back on the next day.
      - They tagged cement at 720', and drilled it out to 2,665'MD.
      - CBL was ran, cement shown to 2,620'.
      - They perforated from 2,587' to 2,589'.
        - 4 SPF 0.42"
      - Tried to cement, could not circulate. Re-ran CBL. Cement found at 1,920'.
      - Perforated from 1,880' to 1,882'.
        - 4SPF, 0.42"
      - They cemented with Allied, 600 sxs of Class A NEAT cement. 12bbbls of cement returned to pit.
  - They then rigged down and moved off 12/26/2011

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Select County: (091) Taylor    Select datatypes:  (Check All)

Enter Permit #: 001201

Location     Production     Plugging

Owner/Completion     Stratigraphy     Sample

Pay/Show/Water     Logs     Btm Hole Loc

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit-Numbering Series](#)
- [Usage Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- ["Pipeline-Plus" New](#)

WV Geological & Economic Survey:

Well: County = 91 Permit = 001201

Report Time: Thursday, September 20, 2018 12:32:17 PM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4709101201	Taylor	1201	Court House	Grafton	Fairmont	39.29704	-80.110147	576731.4	4350117.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LON_DD	LAT_DD
4709101201	1	As Proposed	576736.3	4351180.7	-80.109968

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR_AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_P
4709101201	-/-	Dvtd Orgnl Loc	Permitted	Patriot Mining Company Inc	2HMA		Coaltrain		Glen C Larew et al	PDC Mounlaineer, LLC	7760	Marcellus Fm	

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT
4709101201	-/-	-/-	1273	Ground Level																

- There is no Pay data for this well
- There is no Production Gas data for this well
- There is no Production Oil data for this well    \*\* some operators may have reported NGL under Oil
- There is no Production NGL data for this well    \*\* some operators may have reported NGL under Oil
- There is no Production Water data for this well
- There is no Stratigraphy data for this well
- There is no Wireline (E-Log) data for this well
- There is no Plugging data for this well
- There is no Sample data for this well

no records  
only what  
well operator  
provided.

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

API 47-091-01201 County Taylor District Courthouse  
Quad Grafton 7.5' Pad Name Coaltrain Field/Pool Name \_\_\_\_\_  
Farm name Patriot Mining Company, Inc Well Number 2HM  
Operator (as registered with the OOG) Arsenal Resources  
Address 6031 Wallace Rd, Suite 300 City Wexford State PA Zip 15090

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 39 17' 49.44" Easting 80 06' 38.53"  
Landing Point of Curve Northing NA Easting NA  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 1273' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
NA Production string not drilled.

Date permit issued 12/10/2010 Date drilling commenced 12/19/2011 Date drilling ceased 12/26/2011  
Date completion activities began NA Date completion activities ceased NA  
Verbal plugging (Y/N) \_\_\_\_\_ Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 197' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 78' & 783' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
260

Review

Approved [Signature]  
10-23-18

WR-35  
Rev. 8/23/13

API 47-091-01201 Farm name Patriot Mining Company, Inc Well number 2HM

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	40'	New		NA	Y
Surface	17.5"	13 3/8"	470'	New	54.5lb	80'	Y
Coal	NA	NA	NA	NA	NA	NA	NA
Intermediate 1	12.25"	9 5/8"	2813'GL	New	38lb	NA	Y
Intermediate 2	NA	NA	NA	NA	NA	NA	NA
Intermediate 3	NA	NA	NA	NA	NA	NA	NA
Production	NA	NA	NA	NA	NA	NA	NA
Tubing	NA	NA	NA	NA	NA	NA	NA
Packer type and depth set		NA					

Comment Details Cement to surface on Conductor, and Surface. Initial intermediate cement not successful due to plugged shoe. Packaged from 2,800 to 2,920, squeezed cement (200 500 TYPE I CEMENT, 2% CASL).  
CBL showed cement 2,820'. Parked at 2,587'-2589', could not break circulation. Re-ran CBL, cement 1,920'. Parked at 1,580-1,582, cement with 500ppm Class A neat, cement to surface.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	A					Surface	8+
Surface	A	370	15.2	1.28	466.2	Surface	8+
Coal							
Intermediate 1	A	420/420	14.6/16.2	1.38/1.28	578.6/528.2	Surface	8
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 2813'GL Loggers TD (ft) NA  
Deepest formation penetrated \_\_\_\_\_ Plug back to (ft) \_\_\_\_\_  
Plug back procedure \_\_\_\_\_

Kick off depth (ft) NA NOP was not reached

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Conductor: None; Surface: 3 centralizers placed at 47', 82', and 912' and 1 basket 844.7'; Intermediate 1: 8 centralizers placed at 43', 59', 827', 827', 1219', 1504' and 2301' and one basket at 2528.74'; No production string was drilled.

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS NA

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS NA

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED NA



API 47- 091 - 01201

Farm name Patriot Mining Company, Inc

Well number 2HM

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	NA				

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
	NA							

Please insert additional pages as applicable.

WR-35  
Rev. 8/23/13

APT 47- 091 . 01201

Farm name Patriot Mining Company, Inc Well number 2HM

PRODUCING FORMATION(S)	DEPTHS	
NA	TVD	MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface \_\_\_\_\_ psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas \_\_\_\_\_ mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water \_\_\_\_\_ bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
sand, shale	0	78	0	78	Estimated Well Permit
Coal	78	80	78	80	Estimated Well Permit
sand, shale	80	783	80	783	Estimated Well Permit
Coal	783	788	783	788	Estimated Well Permit
sand, shale	788	1522	788	1522	Estimated from 4709100707
Little Lime	1551	1572	1551	1572	Estimated from 4709100707
Big Lime	1686	1683	1686	1683	Estimated from 4709100707
Gartz	2082	2101	2082	2101	Estimated from 4709100707
Fifty-Foot	2101	2180	2101	2180	Estimated from 4709100707
Thirty-Foot	2185	2227	2185	2227	Estimated from 4709100707
Gordon	2289	2307	2289	2307	Estimated from 4709100707
Fourth	2539	2609	2539	2609	Estimated from 4709100707
Fifth	2679	2726	2679	2726	Estimated from 4709100707
Shale	2726	2881	2726	2881	TD

Please insert additional pages as applicable.

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company NA  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company Allied  
Address 1000 Harris Street City Charlottesville State VA Zip 22903

Stimulating Company NA  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable.

Completed by Arsenal Resources Telephone 304-629-6309  
Signature [Signature] Title Permitting Manager Date 10/23/18

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

47-091-01201P  
01/04/2019

WW-4A  
Revised 6-07

1) Date: September 21st, 2018  
2) Operator's Well Number  
Coaltrain #2HM  
3) API Well No.: 47 - 091 - 01201

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>CoalQuest Development LLC</u>	Name _____
Address <u>300 Corporate Center Dr.</u>	Address _____
<u>Scott Depot, WV 25560</u>	
(b) Name <u>Carlo &amp; Patricia A. Ricottilli</u>	(b) Coal Owner(s) with Declaration
Address <u>227 S. Haddix Rd</u>	Name <u>Coalquest Development LLC</u>
<u>Montrise, WV 26283</u>	Address <u>300 Corporation Dr.</u>
	<u>Scott Depot, WV 25560</u>
(c) Name <u>Timothy Corrothers &amp; Regina S. Rager</u>	Name _____
Address <u>631 Long Run Rd</u>	Address _____
<u>Flemington, WV 26347</u>	
6) Inspector <u>Kenneth Greynolds</u>	(c) Coal Lessee with Declaration
Address <u>613 Broad Run Road</u>	Name _____
<u>Jane Lew WV 26378</u>	Address _____
Telephone <u>304-206-6613</u>	

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 Department 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 ADC Mountain Area LLC  
 By: William Veigel  
 Its: Designated Agent  
 Address 65 Professional Place Ste. 200  
Bridgeport, WV 26330  
 Telephone 724-940-1117

RECEIVED  
Office of Oil and Gas

Subscribed and sworn before me this 28 day of September  
J. M. Lott Notary Public  
 My Commission Expires Aug. 7, 2018

NOV 1 2018  
WV Department of Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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).



47-091-01201 P

01/04/2019

WW-9  
(5/16)

API Number 47 - 091 - 01201  
Operator's Well No. \_\_\_\_\_

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

Operator Name PDC Moutaineer, LLC OP Code 494494839  
Watershed (HUC 10) Sand Lick Run Quadrangle Grafton 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: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Vac truck will be used for any fluids, no pit will be used. Fluids will be disposed of properly.)

Will closed loop system be used? If so, describe: n/a

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. n/a

-If oil based, what type? Synthetic, petroleum, etc. n/a

Additives to be used in drilling medium? n/a

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. n/a

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

-Landfill or offsite name/permit number? n/a

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 April 1, 2016, 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 William Veigel

Company Official (Typed Name) William Veigel

Company Official Title Designated Agent, Sr. Director of Production

NOV 1 2018

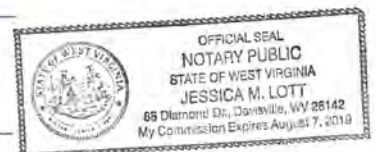
WV Department of Environmental Protection

Subscribed and sworn before me this 28 day of September, 2018

opmolate

Notary Public

My commission expires Aug. 7, 2019



Proposed Revegetation Treatment: Acres Disturbed ONE +/- Prevegetation pH 5.5

Lime One-Two Tons/acre or to correct to pH 6.5

Fertilizer type Agland 5-10-10

Fertilizer amount 500 lbs/acre

Mulch Straw Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Pasture mix 200

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

*James L. Shaper*

Comments:

RECLAIM, RESEED AND MULCH ASAP

RECEIVED  
Office of Oil and Gas

NOV 1 2018

Title OO & GAS INSPECTOR

Date: 10-26-18

WV Department of  
Environmental Protection

Field Reviewed?

Yes

No



WELL RECLAMATION PLAN  
FOR  
PDC COALTRAIN 2HM

PATRIOT MINING COMPANY  
TM 8 PAR 9  
DB 233 PG 133

PATRIOT MINING COMPANY  
TM 8 PAR 8  
DB 233 PG 133

FLOWBACK  
PIT D

FLOWBACK  
PIT C

PROPOSED  
COALTRAIN  
2HM WELL

PATRIOT MINING COMPANY  
TM 8 PAR 10  
DB 233 PG 133

PATRIOT MINING COMPANY  
TM 8 PAR 3  
DB 233 PG 133

LEGEND

- WELL= (W)
- DRILL SITE= (Compass rose symbol)
- WELL SPOT= (Sun symbol)
- SPRING= (Circle with arrow symbol)
- BUILDING= (Solid black rectangle)
- COMPACTED FILL WALLS= (Oval with horizontal lines)
- PIT CUT WALLS= (Oval with vertical lines)
- PIT WASTE= (Oval with diagonal lines)
- GRAVEL= (Oval with cross-hatch pattern)
- SILT FENCE= (Line with 'SF' labels)
- PROPERTY LINE= (Line with triangles pointing out)
- EXISTING FENCE= (Line with 'x' marks)
- PLANNED FENCE= (Line with circles)
- ROAD= (Double parallel lines)
- OPEN DITCH= (Line with arrows pointing out)
- STREAM LINE= (Wavy line)
- CROSS DRAIN= (Line with diagonal hatching)
- FILTER STRIP= (Line with 'x' marks)
- DIVERSION= (Line with diagonal hatching)



PHONE (304) 624-4108

**THRASHER**  
ENGINEERING

CIVIL, ENVIRONMENTAL AND CONSULTING

30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

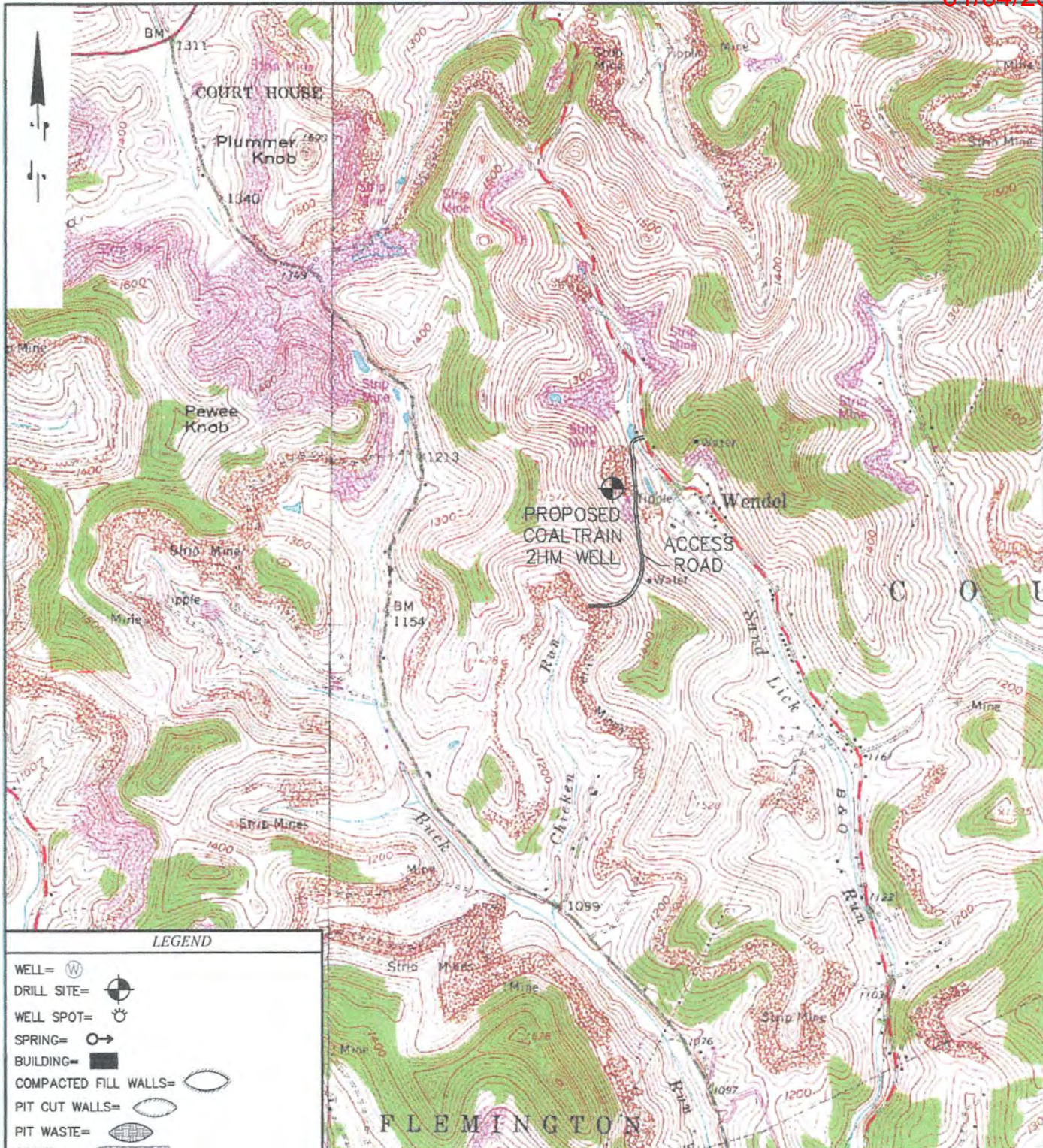
(FAX) (304) 624-7831

WELL RECLAMATION PLAN FOR PDC COALTRAIN 2HM	SCALE: NOT TO SCALE DRAWN: DBS CHECKED: APPROVED:	SHEET No. 6
---	--	-------------

PROJECT# 050-4286 RECEIVED Office of Oil and Gas

NOV 1 2018





**LEGEND**

WELL =	⊙
DRILL SITE =	⊕
WELL SPOT =	⊙
SPRING =	⊙→
BUILDING =	■
COMPACTED FILL WALLS =	⬭
PIT CUT WALLS =	⬭
PIT WASTE =	⬭
GRAVEL =	⬭
SILT FENCE =	—sf—sf—sf—
PROPERTY LINE =	—▲▲▲▲▲▲▲▲▲▲
EXISTING FENCE =	—x—x—x—x—x—x—
PLANNED FENCE =	—○—○—○—○—○—○—
ROAD =	==
OPEN DITCH =	→ ··· → ··· → ···
STREAM LINE =	→ ··· → ··· → ···
CROSS DRAIN =	▨▨▨▨▨▨▨▨▨▨
FILTER STRIP =	▨▨▨▨▨▨▨▨▨▨
DIVERSION =	▨▨▨▨▨▨▨▨▨▨

**WELL RECLAMATION PLAN  
PDC COALTRAIN 2HM  
GRAFTON 7.5 QUADRANGLE**

2000'      0      2000'      4000'

RECEIVED  
Office of Oil and Gas  
NOV 1 2018  
WV Department of  
Environmental Protection

<p><b>THRASHER</b> ENGINEERING CIVIL, ENVIRONMENTAL, AND CONSULTING 30 COLUMBIA BOULEVARD • CLARKSBURG, WV 25301</p> <p>PHONE (304) 624-4108      (FAX) (304) 624-7631</p>	<p>WELL RECLAMATION PLAN FOR PDC COALTRAIN 2HM</p> <p><b>PROJECT# 050-4286</b></p>	<p>SCALE: NOT TO SCALE</p> <p>DRAWN DBS</p> <p>CHECKED</p> <p>APPROVED</p>	<p>SHEET No.</p> <p><b>5</b></p>
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WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-091-01201 WELL NO.: Coaltrain #2hm

FARM NAME: Patriot Mining Company, Inc

RESPONSIBLE PARTY NAME: PDC Moutaineer, LLC

COUNTY: Taylor DISTRICT: Courthouse

QUADRANGLE: Grafton 7.5'

SURFACE OWNER: CoalQuest Development, LLC, Carlo & Patricia Ricottolini, Timothy Corrothers & Regina S. Rager

ROYALTY OWNER: Josh & Jared Inc, D. Keith Larew, & Thomas A. Willis

UTM GPS NORTHING: 4350117.6

UTM GPS EASTING: 576731.4 GPS ELEVATION: 1273'

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  : Post Processed Differential

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.

[Signature]  
Signature

Designated Agent  
Title

9-28-18  
Date

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