



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, February 18, 2020
WELL WORK PLUGGING PERMIT
Horizontal Plugging

ARSENAL RESOURCES LLC
6031 WALLACE RD. EXTENSION

WEXFORD, PA 15090

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: 2/18/2020

Promoting a healthy environment.

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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

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.

WW-4B
Rev. 2/01

- 1) Date January 27, 2020
 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 Arsenal Resources Inc 7) Designated Agent Ross Schweitzer
 Address 6031 Wallace Rd Ext, Suite 300 Address 6031 Wallace Rd Ext, Suite 300
Wexford, PA 15090 Wexford, PA 15090
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
 Name Kenneth Greynolds Name Stalnaker Energy Corporation
 Address 613 Broad Run Road Address 220 West Main St
Jane Lew, WV 26378 Glenville, WV 26351

- 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 L. Greynolds Date 1-27-20

Work Order Attachment

47-091-01201

Coaltrain #2HM

Run Bond log when necessary to find cement top. Gel spacer 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 cement.
9. Run tubing to TD and fill entire hole with cement to surface.
10. Set 3' high x 7" casing with concrete; add API for identification.
11. RDMO
12. Reclaim location
13. 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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WR-35
Rev. 8/23/13

Page 1 of 4

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:

REC

Reviewe

Approved [Signature]

10-25-18

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 chca. Perforated from 2,800 to 2,920, squeezed cement (208 SIB TYPE I CEMENT, 2% OACI). CBL showed cement 2,820'. Perforated 2,587'-2589', could not break circulation. Re-ran CBL, cement 1,920'. Perforated 1,850-1,882, cement with 600ccs Class A neat, cement to surface.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	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	14.8/16.2	1.38/1.28	579.6/529.2	Surface	8
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 2818GL Loggers TD (ft) NA
 Deepest formation penetrated _____ Plug back to (ft) _____
 Plug back procedure _____
 Kick off depth (ft) NA KOP 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: Motor Surface 3 centralizers placed at 47', 131', and 917' and 1 basket 948.75'; Intermediate: 9 on surface placed at 47', 331', 627', 923', 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

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API 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 ₂ 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	1588	1663	1588	1663	Estimated from 4709100707
Gantz	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 _____

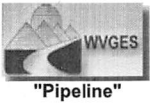
Cementing Company Allied
Address 1000 Harris Street City Charlottesville State VA Zip 22903

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



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

Enter Permit #: 001201

Get Data Reset

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](#)
- [Disclaimers](#)
- [WVGES Main](#)
- ["Pipeline-Plus" New](#)

WV Geological & Economic Survey:

Well: County = 91 Permit = 001201

Report Time: Monday, January 27, 2020 10:40:55 AM

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4709101201	Taylor	1201	Court House	Grafton	Fairmont	39.297039	-80.110146	576731.4	4350117.6

Bottom Hole Location Information:

API	EP_FLAG	UTME	UTMN	LONG_DD	LAT_DD
4709101201	1 As Proposed	576736.3	4351180.7	-80.109968	39.306617

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_PI
4709101201	12/26/2011	Dvtd Orgnl Loc	Completed	Patriot Mining Company Inc	2HMA		Coaltrain		Glen C Larew et al	PDC Mountaineer, LLC		7760	Marcellus Fm
4709101201	-/-	Plugging	Cancelled	CoalQuest Development LLC	2HM		Patriot Mining Company Inc		J & J Inc/D K Larew/T A Willis	PDC Mountaineer, LLC			

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	NGL_BEF	
4709101201	12/26/2011	12/19/2011	1273	Ground Level	Brgprt-Pmlytw			Development Well	Unsuccessful	not available	Rotary	NotCrpild	2818			2818						
4709101201	-/-	-/-	1273	Ground Level																		

Comment: 12/26/2011 Problems drilling. Completion says plugged to surface.

Comment: -/- Additional Surface Owners: Carlo & Patricia Ricottolini/ Timothy Corrothers & Regina S Rager

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4709101201	12/26/2011	Water	Fresh Water	Vertical									197 Pennsylvanian System

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

Well was transfer to Aresnal Resources from PDC mountaineer on 01/02/2020

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WW-4A
Revised 6-07

1) Date: January 27, 2020
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:
(a) Name CoalQuest Development LLC *Waiver* ✓
Address 1 Cityplace Drive
Saint Louis, MO 63141
(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 _____
Address _____
(b) Coal Owner(s) with Declaration
Name CoalQuest Development LLC *Waiver* ✓
Address 1 Cityplace Drive
Saint Louis, MO 63141
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

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WV Department of Environmental Protection

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.

Commonwealth of Pennsylvania - Notary Seal
Annmarie O'Connor, Notary Public
Allegheny County
My commission expires March 17, 2022
Commission number 1013834
Member, Pennsylvania Association of Notaries

Well Operator Arsenal Resources LLC
By: Ross Schweitzer *[Signature]*
Its: Designated Agent *Responsible Person - Sr. Director of Drilling*
Address 6031 Wallace Road Ext., Suite 300
Wexford, PA 15090
Telephone 724-940-1100

Subscribed and sworn before me this 27th day of January 2020
Annmarie O'Connor Notary Public
My Commission Expires 3/17/2022

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.

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WV Department of
Environmental Protection

SURFACE OWNER WAIVER

Operator's Well
Number

Coaltrain #2HM

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

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

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) 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.

Comments must be in writing. Your comments must 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.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

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

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

Signature

Date

Name
By
Its

[Handwritten Signature]
Coaltrain Developer LLC
[Handwritten Name]
Power of Attorney

Date 1/30/2020

Signature

Date

WW-4B

API No. 47-091-01201 P
Farm Name _____
Well No. Coaltrain #2HM

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Office of Oil and Gas

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WV Department of
Environmental Protection

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator ____ / owner / lessee ____ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: 1/30/2020

Coal River Development LLC
By: [Signature]
Its Power of Attorney

47-091-012019

POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

RECEIVED
Office of Oil and Gas

FEB 10 2020

WV Department of
Environmental Protection

Dated: January 1, 2020

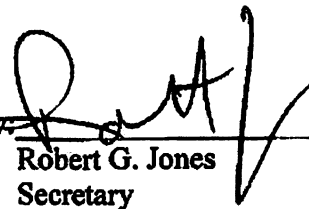
Expires: December 31, 2020

KNOW ALL MEN BY THESE PRESENTS: That CoalQuest Development LLC, a limited liability company formed under the laws of the State of Delaware (the "Company"), acting by and through Robert G. Jones, its duly authorized Secretary, has and does hereby appoint Greg Nair its true and lawful Attorney-in-Fact with power and authority, for and on behalf, and in the name of the Company, during the period herein specified, and subject to the restrictions and limitations set forth in this Power, to execute, acknowledge and deliver in the ordinary and regular course of the Company's business, applications for mining, environmental, safety, and health permits, permit transfers, or permit bond releases or bond adjustments, amendments, supplements or modifications to such permits, certificates, gas well plugging applications, shallow well drilling permit applications, or other instruments directly related to such amendments, supplements or modifications, monthly production reports, air quality, water quality or other environmental reports, quarterly discharge monitoring reports and any other like or similar reports required to be filed with any local, state or federal governmental agency.

The Attorney herein appointed shall be authorized to act pursuant to this Power from the date hereof only so long as such Attorney shall remain an employee of Arch Coal, Inc. or any subsidiary thereof, or until December 31, 2020, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed as of the day and year first above written, by the undersigned, Robert G. Jones, duly authorized Secretary of the Company.

COALQUEST DEVELOPMENT LLC

By  _____
Robert G. Jones
Secretary

47-091-01201P

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Office of Oil and Gas

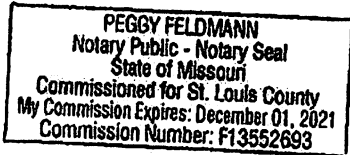
FEB 10 2020

WV Department of
Environmental Protection

STATE OF MISSOURI)
) ss
COUNTY OF ST. LOUIS)

On this 13th day of December, 2019, before me, the undersigned notary public, personally appeared Robert G. Jones, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.



Peggy Feldmann
Notary Public

My Commission Expires: December 1, 2021

47-091-01201P

WW-9
(5/16)

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

RECEIVED
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FEB 10 2020
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Environmental Protection

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

Operator Name Arsenal Resources Inc OP Code 494519412
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 [Signature]
Company Official (Typed Name) Ross Schweitzer
Company Official Title Designated Agent, Senior Director of Drilling

Subscribed and sworn before me this 27th day of January, 2020
Annamarie O'Connor

My commission expires 3/17/2022

Commonwealth of Pennsylvania - Notary Seal
Annamarie O'Connor, Notary Public
Allegheny County
My commission expires March 17, 2022
Commission number 1013834
Member, Pennsylvania Association of Notaries

47-091-012018

RECEIVED
Office of Oil and Gas

FEB 10 2020

Form WW-9

Operator's Well No. _____ WV Department of
Environmental Protection

Proposed Revegetation Treatment: Acres Disturbed 1 +/- Prevegetation pH 5.5

Lime 1-2 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 Mixture	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: *Samuel L. Reynolds*

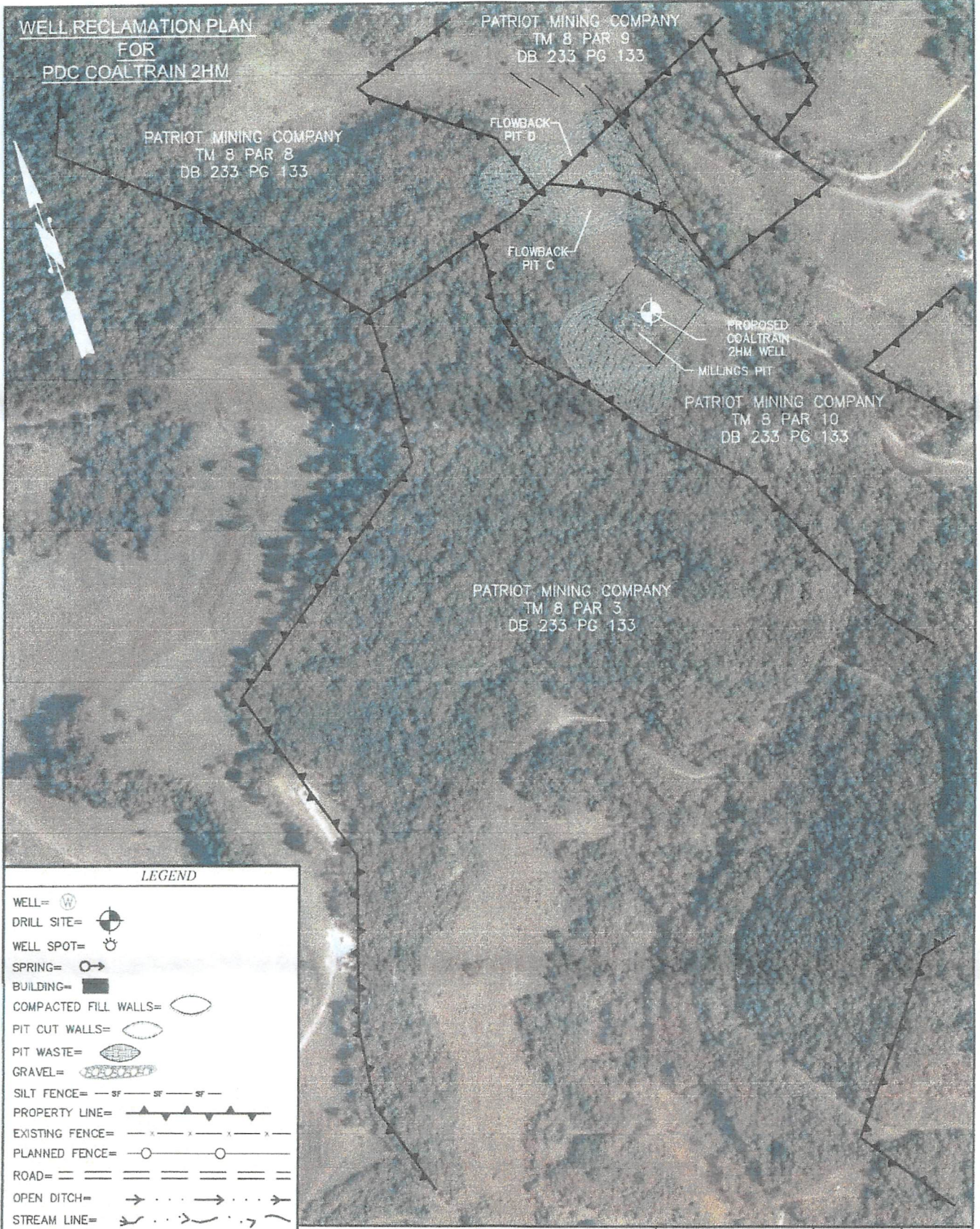
Comments: RECLAIM ASAP

Title: OIL & GAS INSPECTION Date: 1-27-20

Field Reviewed? () Yes () No

47-091-01201H

**WELL RECLAMATION PLAN
FOR
PDC COALTRAIN 2HM**



LEGEND

- WELL =
- DRILL SITE =
- WELL SPOT =
- SPRING =
- BUILDING =
- COMPACTED FILL WALLS =
- PIT CUT WALLS =
- PIT WASTE =
- GRAVEL =
- SILT FENCE =
- PROPERTY LINE =
- EXISTING FENCE =
- PLANNED FENCE =
- ROAD =
- OPEN DITCH =
- STREAM LINE =
- CROSS DRAIN =
- FILTER STRIP =
- DIVERSION =

PHONE
(304) 624-4152

THRASHER
ENGINEERING

CIVIL, ENVIRONMENTAL AND CONSULTING
16 COLUMBIA BOULEVARD CLARKSBURG, WV 26301

(FAX)
(304) 624-7931

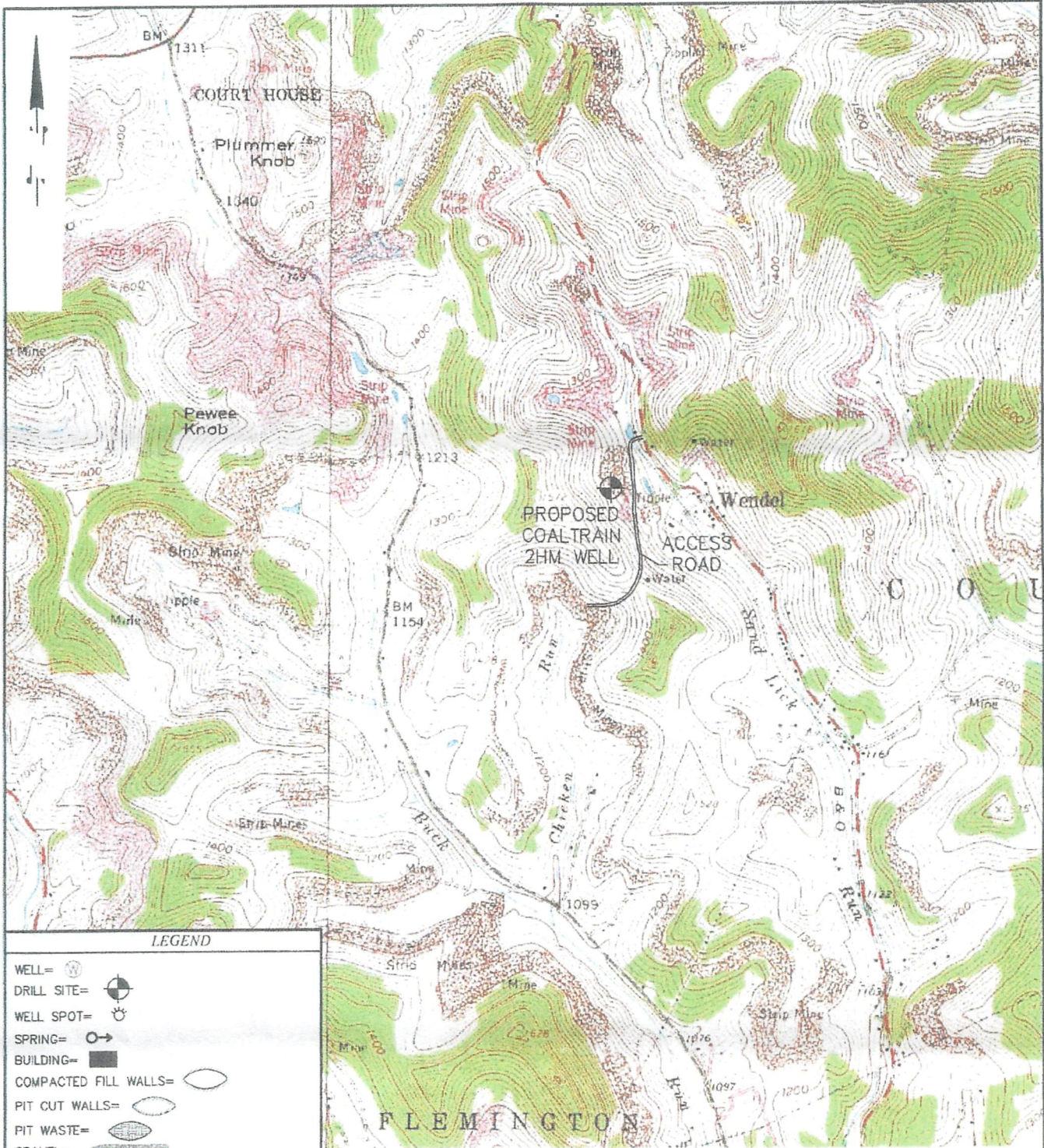
WELL RECLAMATION PLAN
FOR
PDC COALTRAIN 2HM

SCALE: NOT TO SCALE
DRAWN: DBS
CHECKED:
APPROVED:

SHEET No.

6

PROJECT# 050-4286



LEGEND

- WELL =
- DRILL SITE =
- WELL SPOT =
- SPRING =
- BUILDING =
- COMPACTED FILL WALLS =
- PIT CUT WALLS =
- PIT WASTE =
- GRAVEL =
- SILT FENCE =
- PROPERTY LINE =
- EXISTING FENCE =
- PLANNED FENCE =
- ROAD =
- OPEN DITCH =
- STREAM LINE =
- CROSS DRAIN =
- FILTER STRIP =
- DIVERSION =

WELL RECLAMATION PLAN
PDC COALTRAIN 2HM
GRAFTON 7.5 QUADRANGLE



THRASHER ENGINEERING
CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOWL AVENUE • CLARKSBURG, WV 26031
PHONE (304) 624-4100 (FAX) (304) 624-7641

WELL RECLAMATION PLAN FOR PDC COALTRAIN 2HM	SCALE NOT TO SCALE DRAWN: DJS CHECKED: APPROVED:	SHEET No. 5
PROJECT# 050-4286		

FEB 10 2020

WV Department of
Environmental Protection

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: Arsenal Resources

COUNTY: Taylor DISTRICT: Courthouse

QUADRANGLE: Grafton 7.5'

SURFACE OWNER: CoalQuest Development, LLC

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

Responsible Person
Title

1-27-2020
Date