



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

March 04, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9700318, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief



Operator's Well No: 8113
Farm Name: BLACK, D. J., ETUX
API Well Number: 47-9700318
Permit Type: Plugging
Date Issued: 03/04/2016

Promoting a healthy environment.

03/04/2016

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

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

Date: February 11, 2016
Operator's Well
Well No. 608113 (D. J. Black #8113)
API Well No.: 47 097 - 00318

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: 1700 ft. Watershed: Mud Lick
Location: Buckhannon County: Upshur Quadrangle: Berlin 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 Bryan Harris
Name: P. O. Box 157
Address: Volga, WV 26238
- 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.

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 *Bryan O. Harris* Date 2-22-16

PLUGGING PROGNOSIS

Black, D.J. #8113 (608113)
 Upshur Co. WV
 District, Buckhannon
 API # 47-097-00318

BY: Craig Duckworth
 DATE: 11/17/15

CURRENT STATUS:

10" csg @ 310'
 8 1/4" csg @ 1083'
 6 5/8" csg @ 2568' (packer @ 2564') SHOT 4605 TO 4636
 Elevation @ 1708'

TD: 4656'

Fresh Water @ 100' & 245' Coal @ 174'
 Saltwater @ 2225'
 Gas shows @ 4626' , 2736' , 1760' (1460')

1. Notify State Inspector, **Brian Harris @ 304-553-6087**, 48 hrs.prior to commencing operations.
2. Check TD w/wireline
3. TIH w/tbg to 4656', set 200' C1A cement plug from 4656' to 4456' . (Gas show @ 4626') MAKE SURE TOC IS ≥ 4505'.
4. TOOH w/tbg to 4456', gel hole 4456' to 3500'
5. TOOH w/tbg to 3700' set 200' C1A cement plug from 3500' to 3300', (safety plug).
6. TOOH w/tbg to 3300' gel hole 3300' to 2786'.
7. TOOH w/tbg to 2786', set 250' C1A cement plug 2786' to 2536'. (Gas show @ 2736' & 6 5/8" csg @ 2568').
8. TOOH w/tbg, Free point 6 5/8" csg, cut csg @ free point, TOOH w/csg.
9. 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.
10. TIH w/tbg to 2378' gel hole from 2536 to 1810'.
11. TOOH w/tbg to 1810', set 200' C1A cement plug 1810' to 1610'. (elevation @ 1708' & gas show @ 1760').
12. TOOH w/tbg to 1610', gel hole 1510' to 1133'.
13. TOOH w/tbg to 1133', set 100' C1A cement plug 1133' to 1033'. (8 1/4" csg seat @1083').
14. TOOH w/tbg, Free point 8 1/4" csg, cut csg at free point, TOOH w/csg.
15. 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. COVER ALL COAL, OIL AND GAS SHOWS BELOW CUT WITH CEMENT.

03/04/2016

16. TIH w/tbg to 1033' gel hole from 1033' to 600'.
17. TOOH w/tbg to 600', set 100' C1A cement plug, 600' to 500. (safety plug)
18. Free point 10" csg, cut casing @ free point, TOOH w/csg.
19. 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 *COVER PERFORATIONS WITH CEMENT.*
20. TOOH w/tbg to 500', gel hole 500' to 360'.
21. TOOH w/tbg to 360', set 360' C1A cement plug 360' to 0'. (8 1/4" csg seat @ 310')
22. Erect monument with API#
23. Reclaim location and road to WV-DEP specifications.

RECEIVED
Office of Oil and Gas

FEB 18 2016

WV Department of
Natural Resources

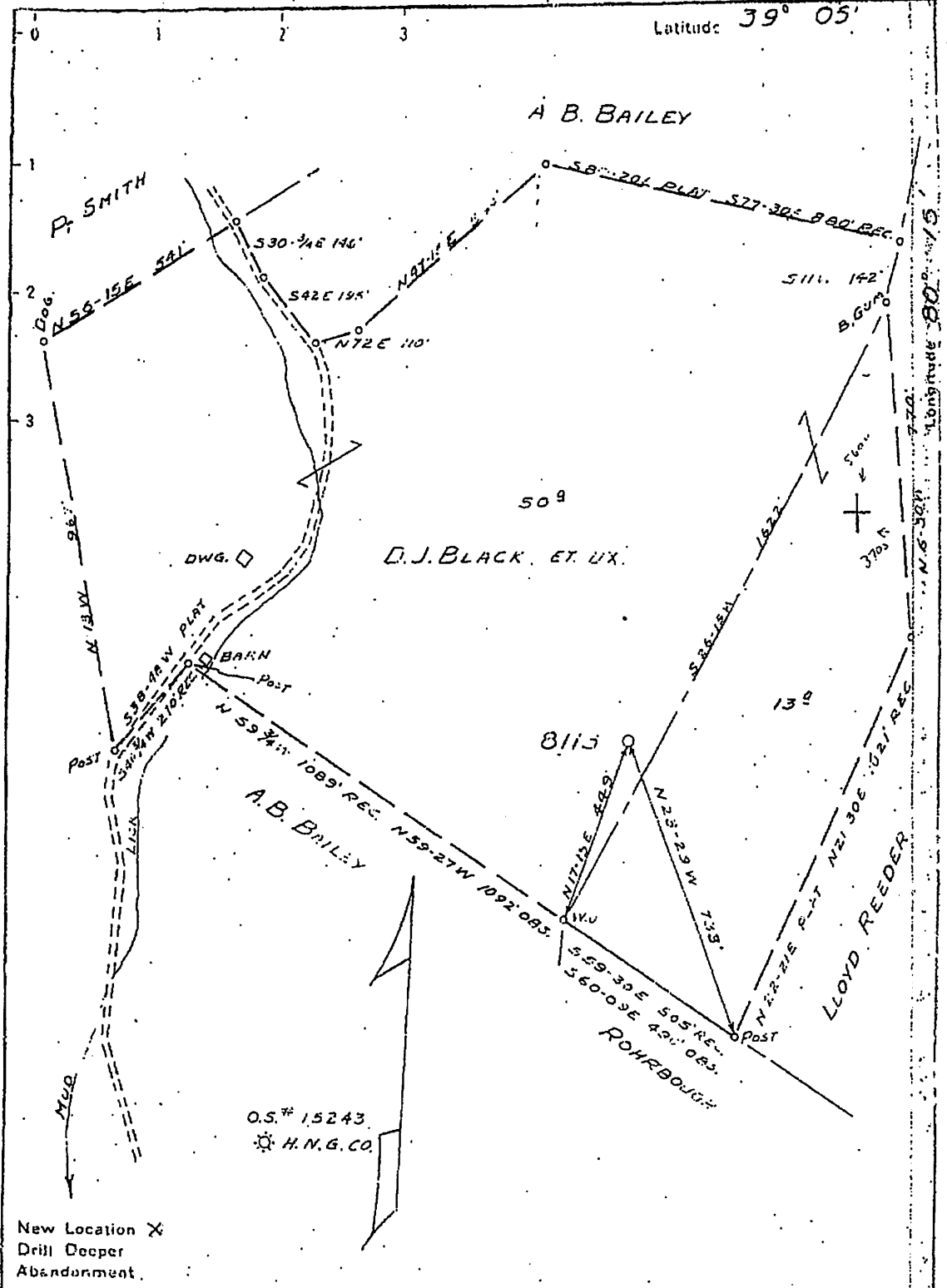
03/04/2016

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Ups 318 47-097-00318
 Weston Quad. 608113
 Company Pittsburgh & W.Va. Gas Co.
 Address Clarksburg, W.Va.
 Farm D.J. Black et ux Acres 63
 Location Weston S/E 4-4
 Well No. 8113 Elev. 1808' VA
 District Buckhannon Upshur County
 Surface D.J. Black, R.D. #1, Buckhannon, W.Va.
 Mineral D.J. Black et ux, R.D. #1, "
 Commenced Jan. 4, 1947
 Completed April 11, 1947
 Date shot 4-12-1947 Depth 4605 to 4636
 with 130 qts. nitro glycerine
 40/10ths W in 1 1/4"
 Open flow
 Volume 80,000 C.F.
 Rock Pressure 810 lbs. 48 hrs.
 Fresh Water 100°; 245' H.F.
 Salt Water 2225' 1/2 blr. hr.

Gas Well
 CASING & TUBING
 10 310 310
 6 1/2 1083 1083
 6 5/8 2568 2568
 Anchor Packer
 Size 8 1/2 x 6 5/8
 Depth 2564
 Coal at 174' 36"

Clay Y	S	0	5	Slate Dk	S	2176	2180
Red Rock	S	5	14	Berea Dk	H	2180	2253
Stone Bl	H	14	33	Slate Dk	S	2253	2256
Red Rock	S	33	43	100' SandLt	H	2256	2380
Stone Bl	H	43	70	Slate Wh	S	2380	2395
Sand Y	H	70	105	30' Sand Wh	H	2395	2418
Slate, Lime Dk&Lt	S&H	105	174	R.Rock	S	2418	2436
Coal Bk	S	160	174	Sand Wh	H	2436	2448
Slate Bk	S	177	185	R.R.&Shells	S	2448	2472
Sand Wh	H	185	198	Gordon Stray Lt	H	2472	2484
Sl.& Lime Dk&Lt	S&H	198	240	R.R.&Lime Shells	S&H	2484	2559
Sand Wh	H	240	270	Gordon Sand Dk	H	2559	2597
R.R.& Lime R&Wh	S&H	270	355	4th Sand	H	2597	2645
L.Sl.&R.R. R&Dk	S&H	355	490	Slate & Shells Wh	S	2645	2686
Sl.&Shls.&Lime Lt	S&H	490	637	5th Sand Dk	H	2686	2744
R.Rock	S&H	637	663	Sl&Shls.Lime Lt	S&H	2744	2980
Slate & Shells Lt	S&H	663	685	Gritty Limo Lt	H	2980	3068
Sand Wh	H	685	727	Sl.,Lm.Sl&Shls. Lt	S&H	3068	3410
Slate Lt	S	727	736	Gritty Limo Lt	H	3410	3435
Sand Gr	H	736	770	Limo, Sl&Shells H&Brk.	S&H	3435	3595
Slate Dk	S	770	787	Gritty Limo Lt	H	3595	3766
L.Dunk Dk	H	787	800	Limo, Bl. H&Brkon	S&H	3766	3822
Sl.&Shls Lt	S&H	800	865	Gritty Limo Dk	H	3822	3928
B.Dunk Bl	H	865	907	Gritty Limo Bl. H&Brk.	S&H	3928	4080
Sl& Shls. Dk	S&H	907	920	Sl&Shls.,Limo Lt. S&H Mod.H	S&H	4080	4250
Freeport Sand Wh	H	920	1003	Limo Gritty Dk	H	4250	4328
Sl&Shls. Dk& Lt	S&H	1003	1075	Sl&Shls Dk S&H	S&H	4328	4464
Homewood Sand Dk	H	1075	1086	Limo Dk Brokon	S&H	4464	4485
Sl.&Shls. Bk	S&H	1086	1112	Sl&Shells Lt S&H	S&H	4485	4595
1st Salt Sand Lt	H	1112	1124	Gritty Limo Dk	H	4595	4605
Sl.&Shls Dk	S&H	1124	1244	Benson Sand Dk	H	4605	4635
2nd Salt Sd Lt	H	1244	1330	Brokon Lime Dk	M	4635	4636
Slate Dk	S	1330	1349	Total Depth			4656
Lime Gritty Dk	H	1349	1379				
Slate Dk	S	1379	1385	Gas 4626 32/10 W 1" Opng.			
3rd Salt Sand Dk	H	1385	1440	Gas 1560 3/10 W 1/2"			
Slate Bk	S	1440	1457	Gas 2736			
3rd Salt Sand Dk	H	1457	1481	Gas 2739 42/10 W 1" Opng.			
Sl.&Shell Dk	S&H	1481	1520				
Rosedale Salt Lt	H	1520	1593				
Sl&Shls Dk	S&H	1593	1615				
Rosedale Salt Dk	H	1615	1625				
Sl&Shells Wh	S&H	1625	1650				
R.R.-Lime Shells	S&H	1650	1843				
Sl&Lime Dk&L	M	1843	1897				
Pink Rock	S	1897	1905				
Big Lime Gr	H	1905	1965				
Big Injun Wh	H	1965	2143				
Slate Dk	S	2143	2158				
Gritty Lime Dk	H	2158	2176				



New Location X
 Drill Deeper
 Abandonment

Company PITTSBURGH & W. VA. GAS CO.
 Address CLARKSBURG, W. VA.
 Farm D.J. BLACK ET UX.
 Tract _____ Acres 63 Lease No. 2433A
 Well (Farm) No. 1 Serial No. 8113
 Elevation (Spirit Level) 1708 VA
 Quadrangle WESTON S.E. 4
 County UPSHUR District BUCKHANNON
 Engineer Paul W. ...
 Engineer's Registration No. _____
 File No. D.20/128 Drawing No. _____
 Date Nov. 8, 1946 Scale 1" = 300'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. UPS-318

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

03/04/2016

9700318 P

WW-4-A
Revised 6/07

- 1) Date: February 11, 2016
- 2) Operator's Well Number
608113 (D. J. Black #8113)
- 3) API Well No.: 47 097 - 00318
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**

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Mike Ross, Inc.</u> Address <u>P. O. Box 210</u> <u>Coalton, WV 26257</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p> <p>6) Inspector <u>Bryan Harris</u> Address <u>P. O. Box 157</u> <u>Volga, WV 26238</u> Telephone <u>(304) 553-6087</u></p>	<p>5) (a) Coal Operator: Name <u>None</u> Address _____</p> <p>(b) Coal Owner(s) with Declaration Name <u>Reppert Fairmont Coal Co.</u> <u>125 Gore Bldg.</u> Address <u>Clarksburg, WV 26330</u></p> <p>(c) Coal Lessee with Declaration Name <u>None</u> Address _____</p>
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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.

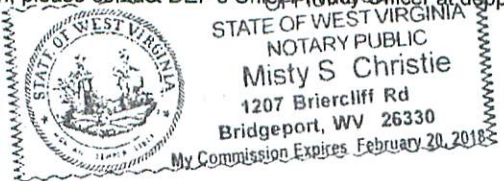
Well Operator:	<u>EQT Production Company</u>
By:	<u>Victoria J. Roark</u>
Its:	<u>Permitting Supervisor</u>
Address:	<u>PO Box 280</u> <u>Bridgeport, WV 26330</u>
Telephone:	<u>(304) 848-0076</u>

Subscribed and sworn before me this 17th day of February, 2016

My Commission Expires: 2/20/18

Notary Public

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 dep_privacyofficer@wv.gov.



RECEIVED
Office of Oil and Gas
February 11, 2016
WV Department of
Environmental Protection

03/04/2016

2) Operator's Well Number

608113 (D. J. Black #8113)

3) API Well No.: 47 097 - 00318

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE**

Operator Name: EQT PRODUCTION COMPANY OP ID: _____

Watershed: Mud Lick Quadrangle: Berlin 7.5'

Elevation: 1700 ft. County: Upshur District: Buckhannon

Description of anticipated Pit Waste: Formation Fluids

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

Will synthetic liner be used in the pit? Yes Is so, what ml.? ~~10 ml~~ 20ml minimum must be used

Proposed Disposal Method for Treated Pit Wastes:

- Land Application
- Underground Injection - UIC Permit Number _____
- Reuse (at API Number) _____
- Offsite Disposal Permit #. _____
- Other: Explain _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc.

If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used? _____

Will closed loop system be used? _____

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? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms 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 *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

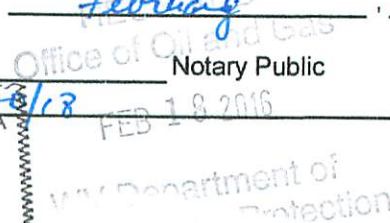
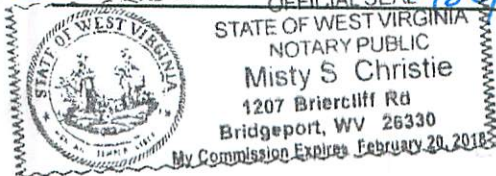
Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 17th day of February, 2016

Misty S. Christie

Notary Public

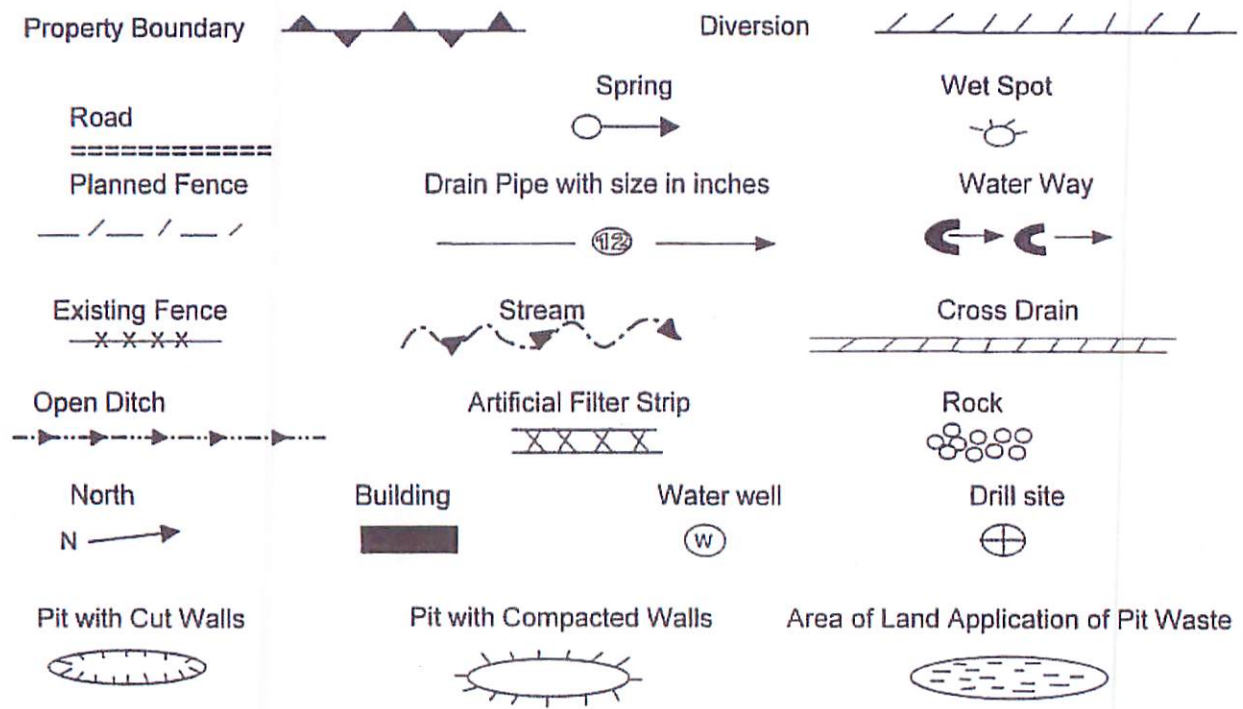
My Commission Expires 2/20/18



03/04/2016

OPERATOR'S WELL NO.:
608113 (D. J. Black #8113)

LEGEND



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: *Raymond O'Hara*

Comments: _____

Title: _____ Date: 2-22-16

Field Reviewed? Yes No

Topo Quad: Berlin 7.5'

Scale: 1" = 2000'

County: Upshur

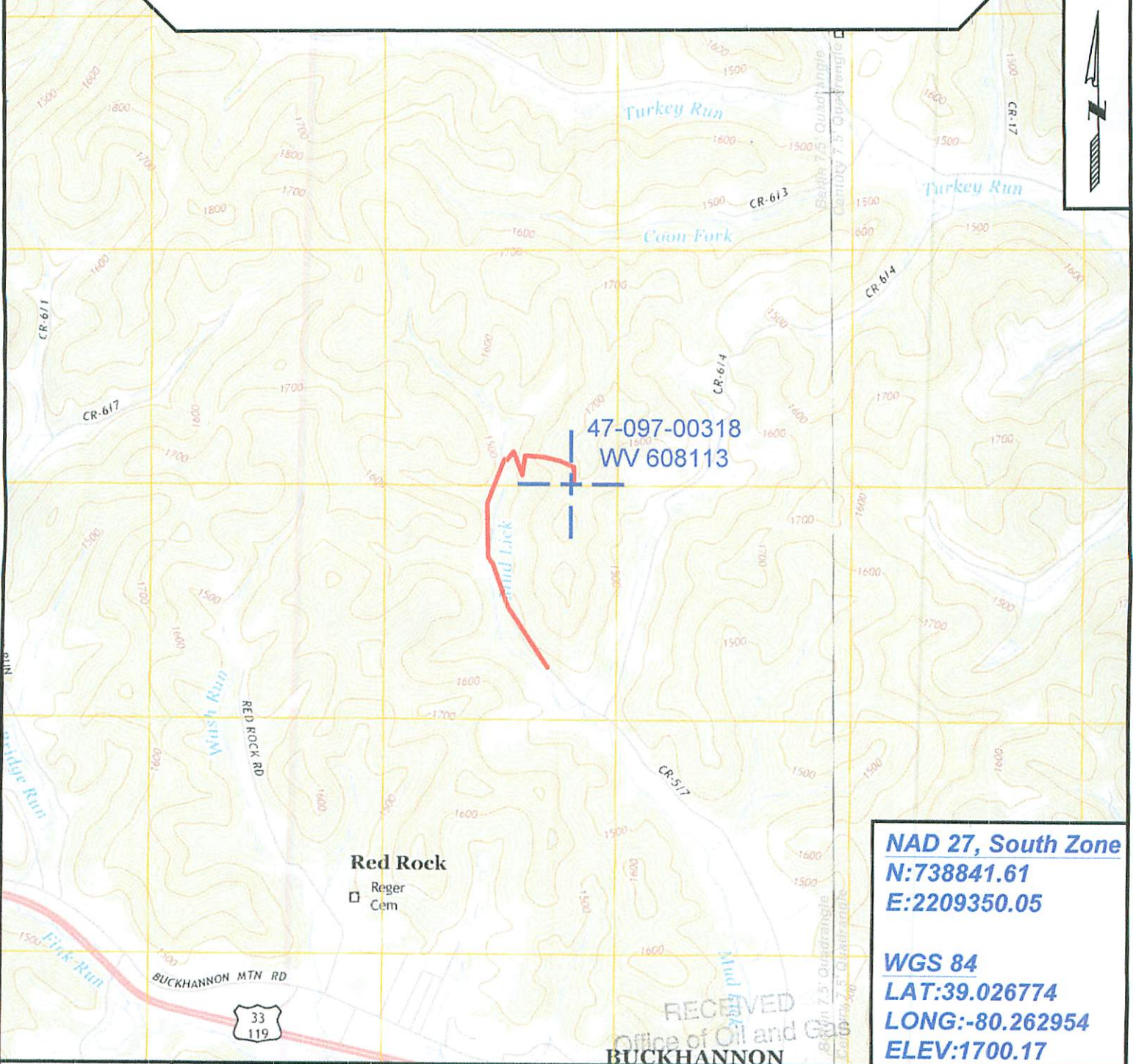
Date: January 15, 2016

District: Buckhannon

Project No: 39-09-00-09

47-097-00318 WV 608113 (D. J. Black #8113)

Topo



NAD 27, South Zone
N:738841.61
E:2209350.05

WGS 84
LAT:39.026774
LONG:-80.262954
ELEV:1700.17



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
03/04/2016

WW-7
8-30-06



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

API: 47-097-00318 WELL NO.: WV 608113 (D. J. Black #8113)

FARM NAME: D. J. Black, et ux.

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Upshur DISTRICT: Buckhannon

QUADRANGLE: Berlin 7.5'

SURFACE OWNER: Mike Ross Inc.

ROYALTY OWNER: Mike Ross Inc.

UTM GPS NORTHING: 4320006

UTM GPS EASTING: 563798 GPS ELEVATION: 518 m (1700 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:

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

Survey grade GPS : Post Processed Differential
Real-Time Differential

Mapping Grade GPS X: Post Processed Differential X
Real-Time Differential

- 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.

FEB 18 2016

Steve Brown
Signature

PS # 2180 WV Department of Environmental Protection
Title Date 2/4/16



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. D. J. Black #8113 - WV 608113 - API No. 47-097-00318

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 881 +/- Owner: Tommy D. Cochran

Address: 1725 Mud Lick Road, Buckhannon, WV 26201 Phone No. _____

Comments: Public water at house

Site: 2 Spacing: 975 +/- Owner: Tommy D. Cochran

Address: 1725 Mud Lick Road, Buckhannon, WV 26201 Phone No. _____

Comments: Pond

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Office of Oil and Gas

FEB 18 2016

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

Topo Quad: Berlin 7.5'

Scale: 1" = 2000'

County: Upshur

Date: January 15, 2016

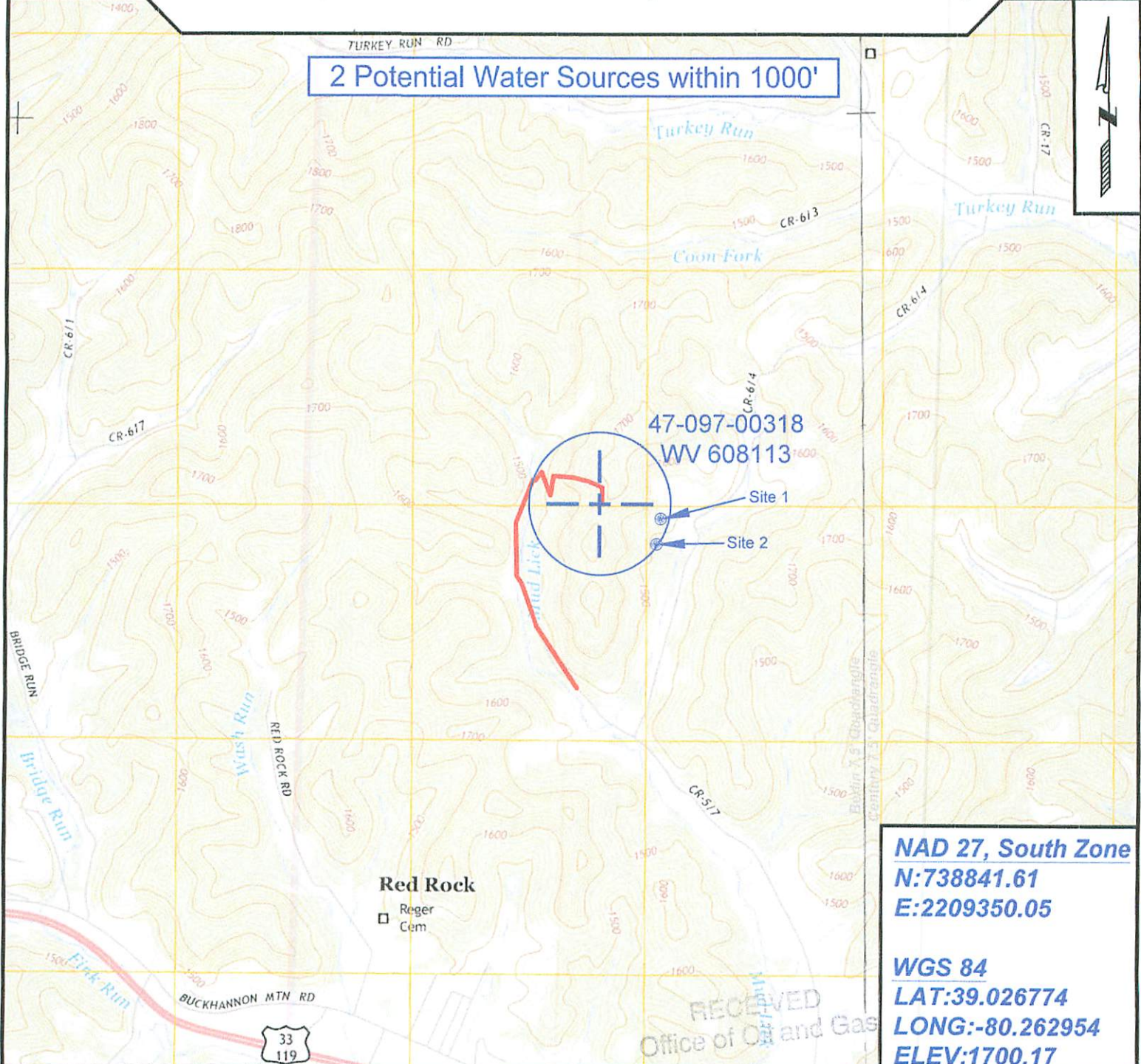
District: Buckhannon

Project No: 39-09-00-09

Water

47-097-00318 WV 608113 (D. J. Black #8113)

2 Potential Water Sources within 1000'



47-097-00318
WV 608113

Site 1

Site 2

Red Rock
Reger
Cem

NAD 27, South Zone
N:738841.61
E:2209350.05

WGS 84
LAT:39.026774
LONG:-80.262954
ELEV:1700.17

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Office of Oil and Gas



SURVEYING AND MAPPING SERVICES PERFORMED BY:
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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
F.O. Box 280
Bridgeport, WV 26330
03/04/2016