



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: 47-9700348, 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: 8145
Farm Name: WESTFALL, CARL D.
API Well Number: 47-9700348
Permit Type: Plugging
Date Issued: 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.

CK 20236
(600.00)
100

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

Date: February 12, 2016
Operator's Well
Well No. 608145 (Carl Westfall #8145)
API Well No.: 47 097 - 00348

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: 1473 ft. Watershed: Glady Fork
Location: Buckhannon County: Upshur Quadrangle: Adrian 7.5'
District: _____
- 6) Well Operator EQT Production Company
Address: 120 Professional Place
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'Hara* Date 2-22-16

PLUGGING PROGNOSIS

Westfall, C.D. #8145 (608145)
 District, Buckhannon
 Upshur, WV
 API # 47-097-00348

BY: R. Green
 DATE: 12/1/15

CURRENT STATUS:

Elevation @ 1479'
 TD @ 4186

10" csg @ 285'
 8 1/4" csg @ 992'
 6 5/8" csg @ 2093' (Set on 6 5/8" X 8 1/4" packer @ 2091')

Freshwater, @ 45', & 500'
 Saltwater @ none reported
 Gas shows @ 500', 560', 1662', 2201', 3462', & 4157'
 Oil shows @ 2201'
 Coal @ 494'

1. Notify State Inspector, **Bryan Harris, 304-553-6087**, 24 hrs. prior to commencing operations.
2. RIH check TD.
3. TIH tbg to 4150', set 200' C1A cement plug, 4150' to 3950'. (Gas show @ 4157').
4. TOOH tbg to 3950', gel hole 3950' to 3500'.
5. TOOH tbg to 3500', set 200' C1A cement plug 3500' to 3300'. (Gas show @ 3462')
6. TOOH tbg to 3300', gel hole 3300' to 3000'.
7. TOOH tbg to 3000', set 200' C1A cement plug 3000' to 2800'. (Safety plug).
8. TOOH tbg to 2800', gel hole 2800' to 2300'.
9. TOOH tbg to 2300' set 400' C1A cement plug 2300' to 1900'. (oil and gas show @ 2201', 6 5/8" packer seat @ 2093'). TIH tbg.
10. Free point 6 5/8" casing, cut casing at free point. TOOH casing. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
11. Gel hole from casing cut to 1750'.
12. TOOH tbg to 1750', set 400' C1A cement plug 1750' to 1350'. (Elevation @ 1479' & gas show @ 1662').
13. TOOH tbg to 1350', gel hole 1350' to 1050'.
14. TOOH tbg to 1050', set 200' C1A cement plug 1050' to 850' (8 1/4" casing seat @ 992'). TOOH tbg.
15. Free point 8 1/4" casing, cut casing at free point. TOOH casing.

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03/04/2016

16. 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.
17. TOOH tbg to top of casing cut plug, gel hole from plug top to 600'.
18. TOOH tbg to 600', set 250' C1A cement plug 600' to 350'. (Gas @ 500' 560', water @ 500', coal @494'). TOOH tbg.
19. Free point 10" casing, cut casing at free point, TOOH casing.
20. If unable to cut and pull 10" casing, TIH and perforate 10" casing with 3 holes each at 250', 200' 150' 100' & 50'.
21. TIH tbg to 350' set 350' C1A cement plug 350' to surface.(Freshwater @ 50')
22. Erect monument with API# and date plugged.
23. Reclaim location, roads to WV-DEP specifications.

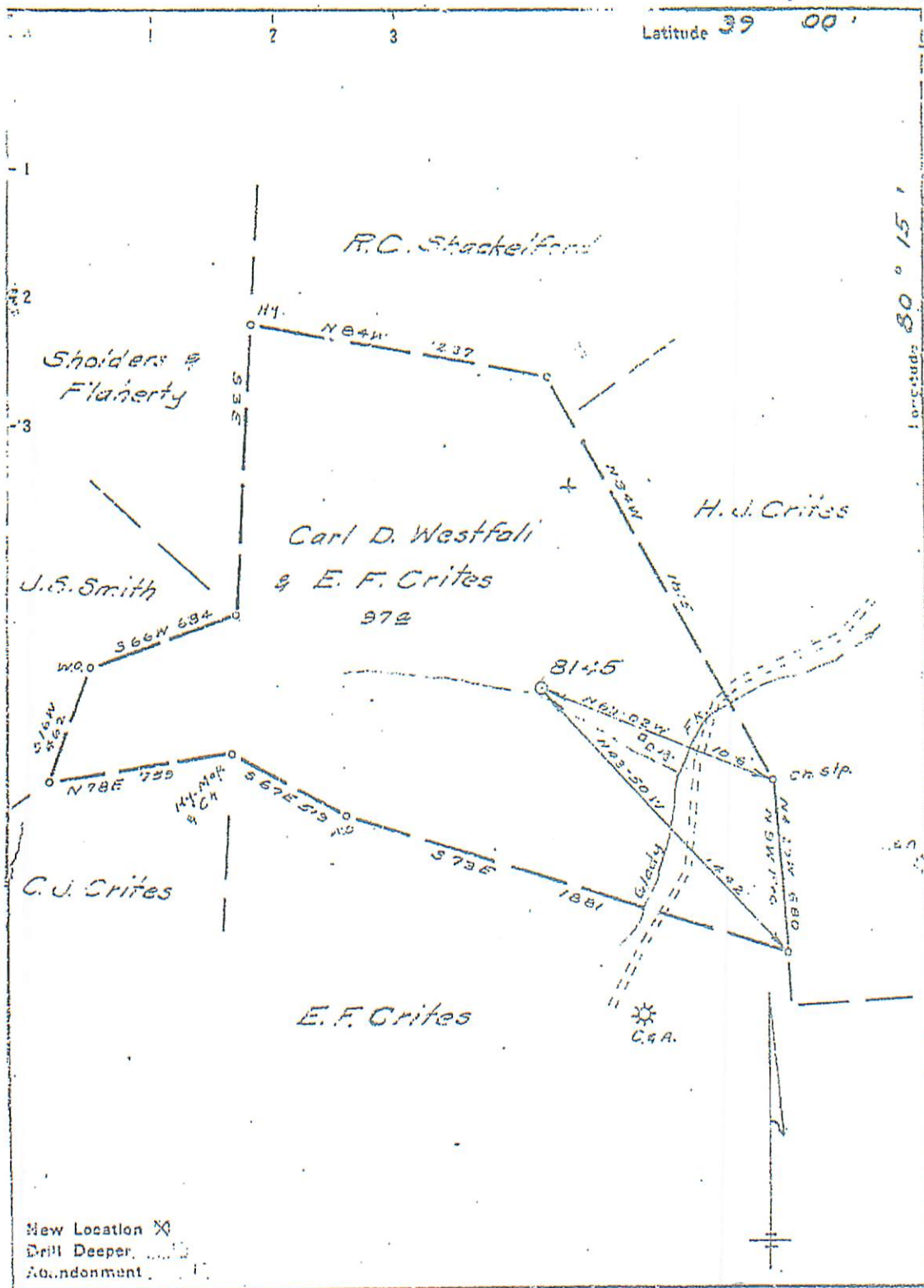
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Environmental Protection

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

Permit No. Ups 348	47-097-00348	Gas Well
Crawford Quad.	609145	CASING & TUBING
Company	Pittsburgh & West Va. Gas Company	
Address	Clarksburg, W.Va.	10 285 285
Farm	Carl D. Westfall Acres 100	2 1/2 992 992
Location	Crawford N/E 2-3	6 5/8 2093 2093
Well No.	6145 Elev. 1479' VA	
District	Buckhannon Upshur County	B.H. Packer
Surface	Carl D. Westfall et al, Buckhannon	Size 8 1/2 x 6 5/8
Mineral	Same	Depth 2091'
Commenced	May 22, 1948	
Completed	Aug. 6, 1948	Coal at 494' 72"
Open flow	22/10ths W in 1 1/2"	
Volumo	97,600 C.F.	
Rock Pressure	810 lbs. 24 hrs.	
Water	45' 5 blr. hr.; 500' 9/2 blr. hr.	

Red Clay	S	0	37	Rod Rock Shells	K	S	1980	2024
Sand Gr	S	37	47	Gordon Stray	R	Open	2024	2049
Red Rock		47	55	Slate & Shells	Red		2049	2081
Lime Bl	H	55	62	Limo	Dk	H	2081	2085
Red Rock	S	62	117	Red Rock		S	2085	2089
Lime Gr	S	117	162	Sand	Dk	H	2089	2099
Slate Blk	S	162	184	Red. Rock		S	2099	2102
Lime Bl	H	184	232	Gordon Sand	Dk	H	2102	2150
Slate Dk	S	232	237	Limo	Lt	S	2150	2155
Lime Gr	H	237	286	S & S			2155	2188
Slate Wh	S	286	320	5th Sand	Gr	H	2188	2255
Limo Wh	H	320	380	Limo	Lt	H&S	2255	2303
Upper Freeport	Sd. Wh H	380	443	S & S			2303	2465
Lime Bl	H	443	494	Limo	Lt	H&S	2465	2495
Coal Blk	S	494	500	S & S	Lt	H&S	2495	2786
Slate Dk	S	500	506	Gritty Lim	Gr	H	2786	2811
Limo	H	506	615	Slate & Shells	Lt	Open	2811	2843
Slate Dk	S	615	524	Limo	Lt	Open	2843	2860
Sand Wh	H	524	530	Slate & Shells	Lt	Open	2860	3080
Limo	H	530	615	Limo	Lt	Open	3080	3130
Slate & Shells	Dk H&S	615	641	Slate & Shells	Lt	Open	3130	3353
1st Salt Sand	Lt H	641	783	Limo	Lt	Open	3353	3458
Shale Dk	S	783	798	Balltown Sand	Dk	Open	3458	3473
2nd Salt Sand	Lt H	798	920	Limo	Lt	Open	3473	3528
Slate & Shells	Dk H&S	920	934	Slate & Shells	Lt	Open	3528	4154
Limo	H	934	960	Bonson Sand	Br	Open	4154	4174
3rd Salt Sand	Lt H	960	1014	Limo	Dk	Broken	4174	4186
Slate & Shells	Blk H&S	1014	1114	Total Depth			4186	
Rosedale Salt	Sd. Lt H	1114	1240					
Slate & Shells		1240	1250	Sh. gas 500'				
Limo Lt	H	1250	1283	Sh. gas 560'				
Maxon Sand	Gr Open	1283	1363	Sh. gas 1662'				
Red Rock		1363	1398	Sh. oil and gas 2201'				
Limo Gr	Open	1398	1403	Gas 3462 52/10 W 1" Opng.				
Slate Wh	S	1403	1413	Gas 4157-4158 36/10 W 1 1/2" Opng.				
Limo Lt	Open	1413	1433					
Slate Wh	S	1433	1443					
Limo Bl	H	1443	1458					
Slate & Rod Rock	Dk R S	1458	1458					
Big Lime	Wh H	1458	1528					
Big Injun	Wh H	1528	1666					
Slate Dk	S	1666	1670					
Squaw Sand	Open Gr	1670	1754					
Slate Dk		1754	1760					
Berea Gr	Open	1760	1803					
Slate & S	Dk	1803	1815					
Sand	Open	1815	1846					
Pink Rock		1846	1848					
50' Sand	Lt H	1848	1891					
50' Sand	Rod H	1891	1905					
Slate	Lt	1905	1910					
30' Sand	Open Lt	1910	1955					
S & S	H&S	1955	1980					

REC'D
Office of Oil and Gas
FEB 18 2016
WV Department of
Environmental Protection



New Location
 Drill Deeper
 Abandonment

Company Pittsburgh & W. Va. Gas
 Address Clarksburg W. Va.
 Farm Carl D. Westfall
 Tract _____ Acres 100 Lease No. 24389
 Well (Farm) No. 1 Serial No. 8145
 Elevation (Spirit Level) 1479 VA
 Quadrangle Crawford NE P²
 County Upshur District Buckhannon
 Engineer Jansud Jeffries
 Engineer's Registration No. 1084
 File No. D-32195 Drawing No. _____
 Date A-26-48 Scale 1"=500'

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

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 OIL AND GAS DIVISION
 FEB 15 1948

WELL LOCATION MAP
 FILE NO. WPS-348

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

— Denotes one inch spaces of original tracing

03/04/2016

WW-4-A
Revised 6/07

1) Date: February 12, 2016
2) Operator's Well Number
608145 (Carl Westfall #8145)
3) API Well No.: 47 097 - 00348
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 Linda Westfall Winspear
Address 4139 Gladly Fork Road ✓
Buckhannon, WV 26201
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Bryan Harris
Address P. O. Box 157
Volga, WV 26238
Telephone (304) 553-6087

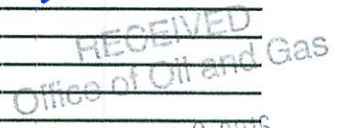
5) (a) Coal Operator:
Name None
Address _____
(b) Coal Owner(s) with Declaration
Name Linda Westfall Winspear
4139 Gladly Fork Road ✓
Address Buckhannon, WV 26201
Name _____
Address _____
(c) Coal Lessee with Declaration
Name None
Address _____

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.

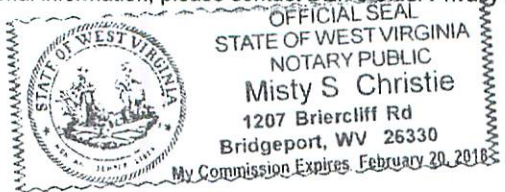
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental 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 17th day of February, 2016
Misty S. Christie Notary Public
My Commission Expires: 2/20/18

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.



03/04/2016

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: Glady Fork Quadrangle: Adrian 7.5'
Elevation: 1473 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.? 20 10 ml

Proposed Disposal Method for Treated Pit Wastes:
X 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.

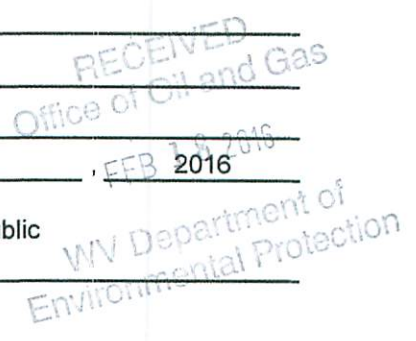
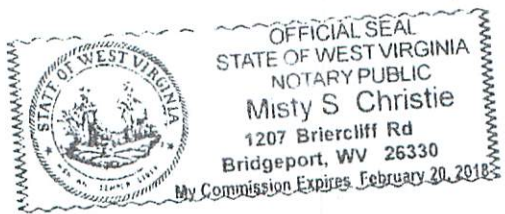
Company Official Signature *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

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

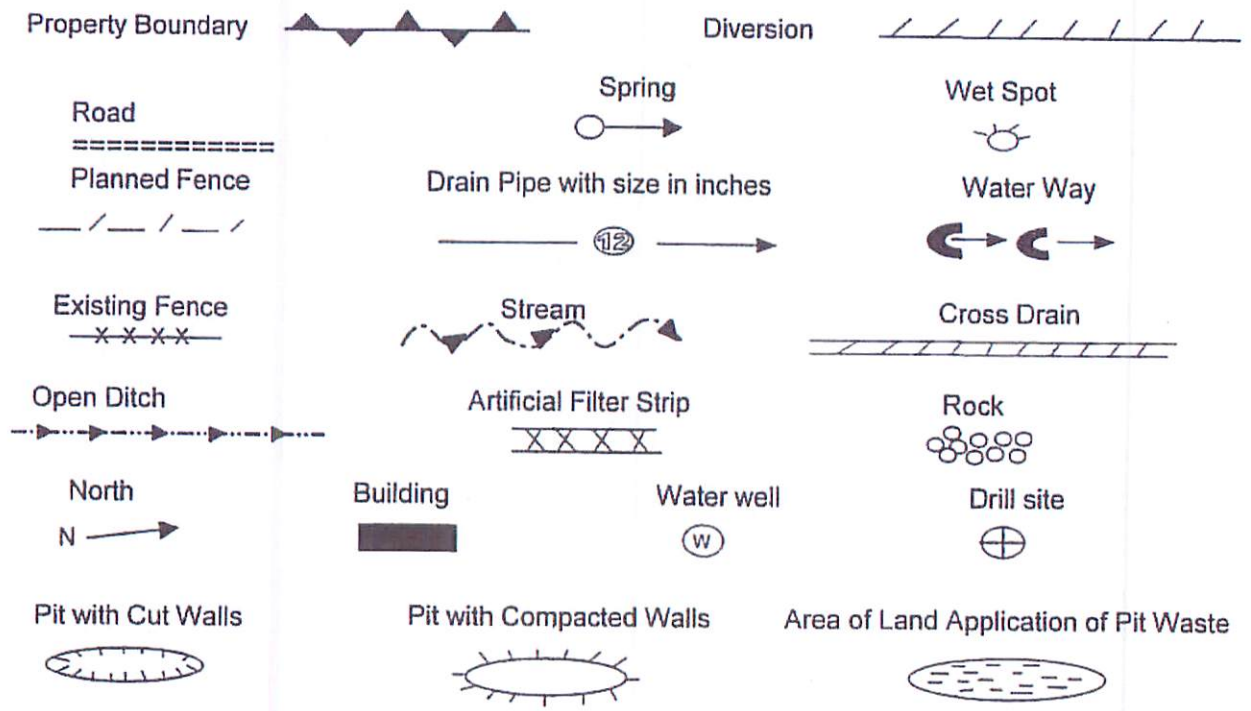
Misty S. Christie Notary Public
My Commission Expires 2/20/18



03/04/2016

OPERATOR'S WELL NO.:
608145 (Carl Westfall #8145)

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: *Debra C. Hansen*

Comments: _____

Title: _____ Date: 2-22-16

Field Reviewed? Yes No

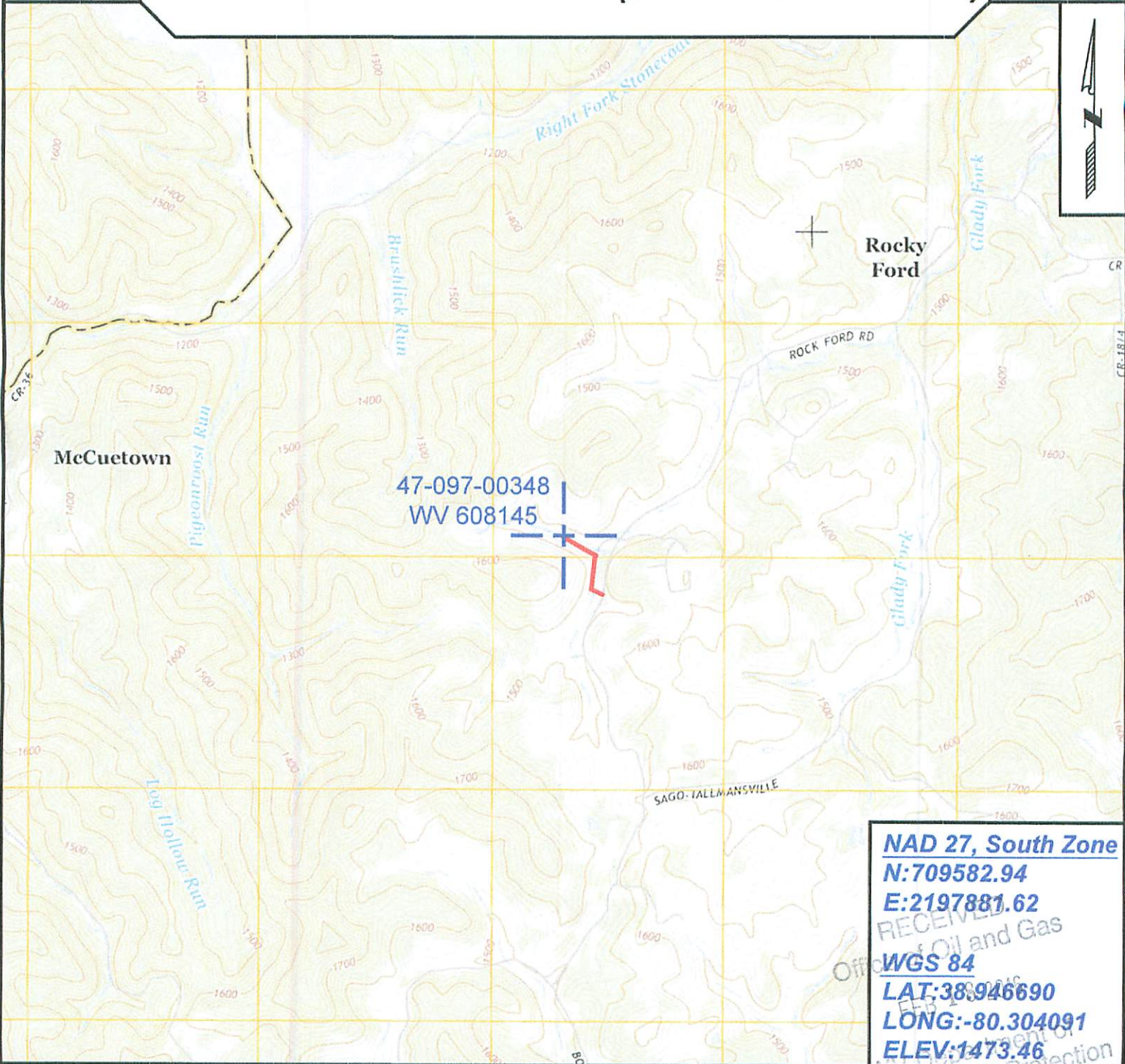
Topo Quad: Adrian 7.5' Scale: 1" = 2000'

County: Upshur Date: January 25, 2016

District: Buckhannon Project No: 39-09-00-09

47-097-00348 WV 608145 (Carl Westfall #8145)

Topo



NAD 27, South Zone
N:709582.94
E:2197881.62
WGS 84
LAT:38.946690
LONG:-80.304091
ELEV:1473.46



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: 47-097-00348 WELL NO.: WV 608145 (Carl Westfall #8145)

FARM NAME: Carl D. Westfall

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Upshur DISTRICT: Buckhannon

QUADRANGLE: Adrian 7.5'

SURFACE OWNER: Linda Westfall Winspear

ROYALTY OWNER: Linda Westfall Winspear, et al.

UTM GPS NORTHING: 4311091

UTM GPS EASTING: 560305 GPS ELEVATION: 449 m (1473 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

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
APR 18 2016
WV Department of
Environmental Protection

Stacy O'Brien
Signature

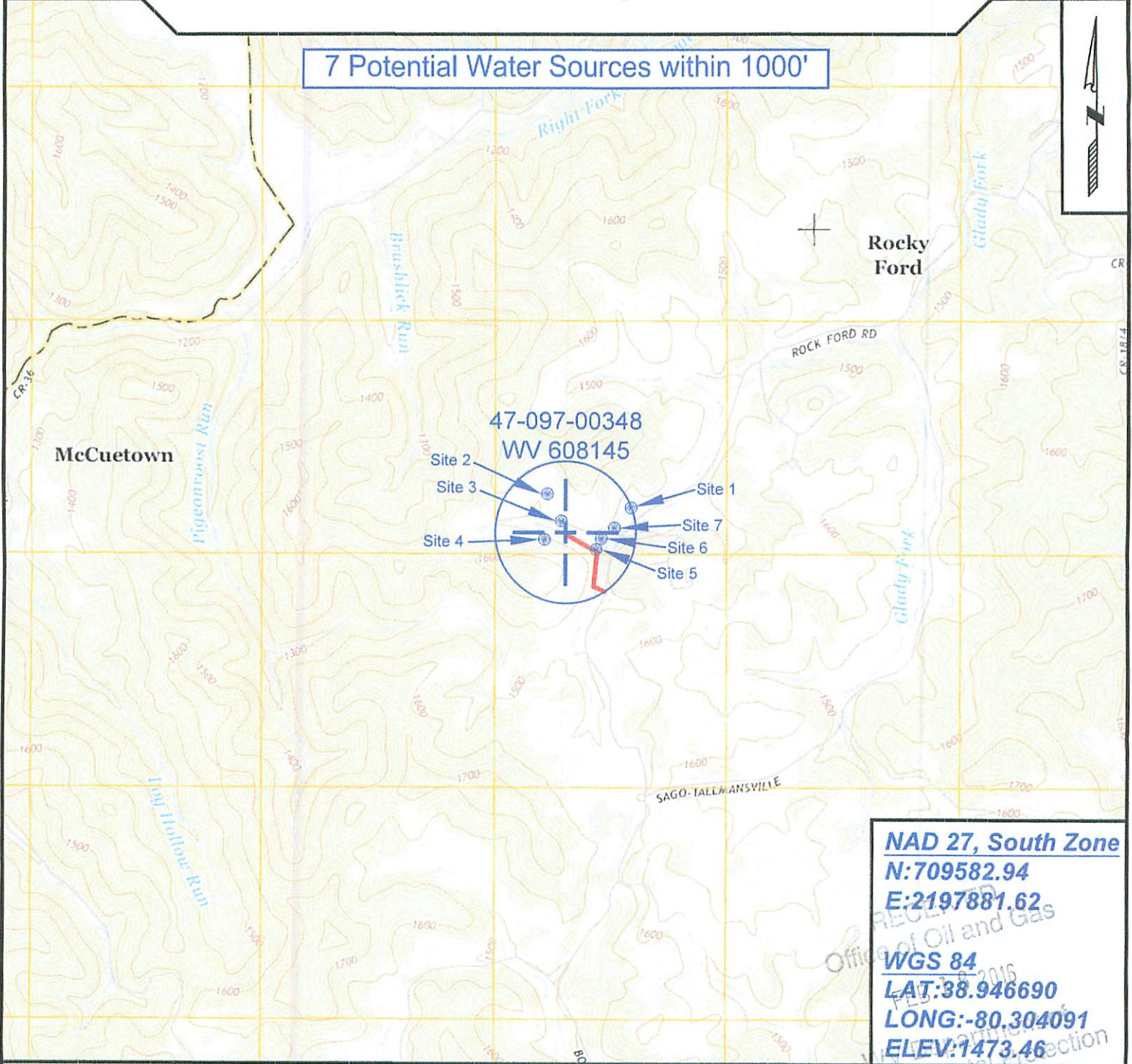
PS # 2180
Title

2/4/16
Date

Topo Quad: Adrian 7.5' Scale: 1" = 2000'
 County: Upshur Date: January 25, 2016
 District: Buckhannon Project No: 39-09-00-09

Water **47-097-00348 WV 608145 (Carl Westfall #8145)**

7 Potential Water Sources within 1000'

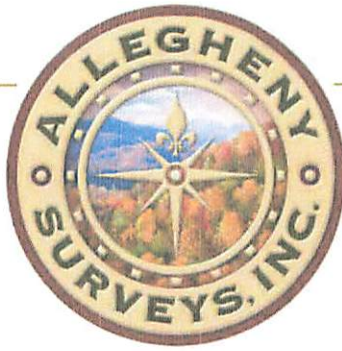


NAD 27, South Zone
N: 709582.94
E: 2197881.62
WGS 84
LAT: 38.946690
LONG: -80.304091
ELEV: 1473.46



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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
 P.O. Box 280
 Bridgeport, WV 26330
03/04/2016



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
LEASE NAME AND WELL No. Carl Westfall #8145 - WV 608145 - API No. 47-097-00348

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 990 +/- Owner: Charlotte Henlin
Address: 4054 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

Site: 2 Spacing: 599 +/- Owner: Linda Winspear
Address: 4130 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

Site: 3 Spacing: 175 +/- Owner: Linda Winspear
Address: 4130 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

Site: 4 Spacing: 317 +/- Owner: Linda Winspear
Address: 4130 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

Site: 5 Spacing: 493 +/- Owner: Linda Winspear
Address: 4130 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

Site: 6 Spacing: 512 +/- Owner: Linda Winspear (Renna Casto-Renting)
Address: 4134 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____
Comments: _____

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

03/04/2016

Site: 7 Spacing: 697 +/- Owner: Linda Winspear

Address: 4130 Glady Fork Rd., Buckhannon, WV 26201 Phone No. _____

Comments: _____

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Environmental Protection