



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

July 01, 2013

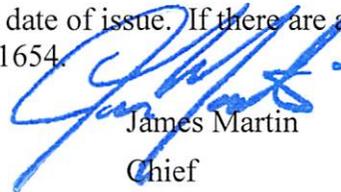
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4501208, 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: WV 146551 (ISLAND CREEK COA)
Farm Name: HEARTWOOD FORESTLAND FU

API Well Number: 47-4501208

Permit Type: Plugging

Date Issued: 07/01/2013

Promoting a healthy environment.

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

CK # 15553
#300

Date: 5/28/2013
Operator's Well
Well No. 146551 Island Creek Coal D-59
API Well No.: 47 045 - 01208

**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: 843' Watershed: Crawley Creek
Location: Guyan 04 County: Logan 45 Quadrangle: Chapmanville 7.5' 2.88
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 Ralph Triplett
Name: 5539 McCellan Hwy
Address: Branchland, WV 25506

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 Ralph D. Triplett Date June 11, 2013

PLUGGING PROGNOSIS

Island Coal D-59 (146551)

Logan County, W.V.
API # 47-045-0128

BY: Doug Fry

DATE: 3/15/13

CURRENT STATUS:

16" @ 41'

8 5/8" @ 223' - Cmt w/ 125'

4.5" @ 704' - Cmt w/ 191'

2 3/8" tubing @ 618'

OK
RDT

Fresh Water @ 33'- 60'- 420'

Gas shows/ @ Lee Sands Perfed @ 600'-608'- 588' - 592'

Oil Shows @ None Reported

Salt Sand top 588'

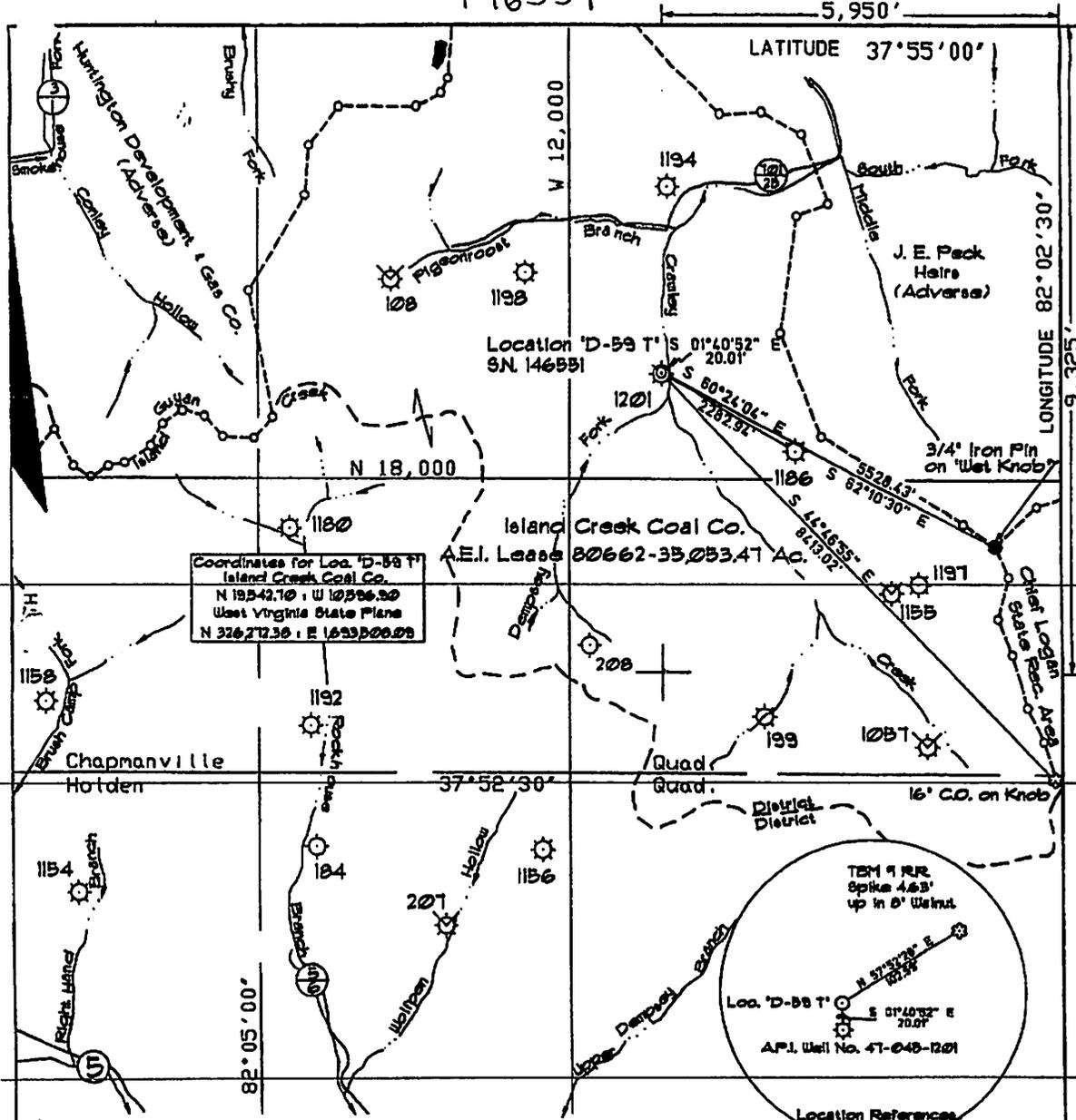
Coal: None Reported

Stimulation; Acid Frac

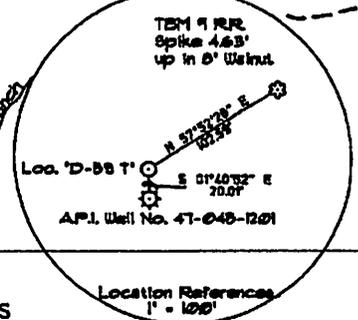
Notify inspector, Ralph Triplett @ 304-389- 0350 24 hrs prior to commencing operations.

1. Pull 2" tubing , tally tubing back in hole to 610'.
2. TOO H w/ tubing to 610'; Set 130' C1A Cement Plug @ 610' to 480' (Lee Sand Perfs).
3. TOO H w/ tubing, Free Point 4.5" csg , cut 4.5" csg @ Free Point, TOO H w/4.5" csg. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all 1st Salt Sand top, FW, Gas, Oil and Coal shows below the 8 5/8" cut. Do not omit any plugs shown below.
4. TIH w/ tubing to 480'; Set 334' C1A Cement Plug @ 480' to 100' (8 5/8" csg pt , FW show, Salt Sand).
5. TOO H w/ tubing, Free Point 8 5/8" csg , cut 8 5/8" csg @ Free Point, TOO H w/8 5/8" csg. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all Salt Sand top, FW, Gas, Oil and Coal shows below the 4.5" cut. Do not omit any plugs shown below.
6. TIH w/ tubing to 100'; Set 100' C1A Cement Plug @ 100' to Surface' (2 FW shows).
7. Top off as needed
8. Set monument to WV DEP specs
9. Reclaim Location to WV DEP Specifications.

146551



Coordinates for Loc. 'D-59 T' Island Creek Coal Co.
 N 19°42'10" W 12°56'30"
 West Virginia State Plane
 N 326712.36 E 1653200.00



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1: 12000
 PROVEN SOURCE OF ELEVATION A.P.I. Well No. 47-045-1186 TBM #1 Elev. = 1231.26

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY THE LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.
 (SIGNED) _____
 R.P.E. _____ L.L.S. 618



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

DATE February 18 19 94
 OPERATOR'S WELL NO. D-59 T
 API WELL NO. SN 146551
47-045-1208

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMIT
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 899.12 WATER SHED Dempsay Fork of Crawley Creek of the Guyandotte River
 DISTRICT Guyan COUNTY Logan
 QUADRANGLE Chapmanville

FACE OWNER Georgia-Pacific Corporation (Tract I. C. 3) ACREAGE 798.76
 OIL & GAS ROYALTY OWNER Island Creek Coal Company LEASE ACREAGE 39,283.47

LEASE NO. 80662
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Salt Sand ESTIMATED DEPTH 680' KB
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bobby E. Widener
 ADDRESS P.O. Box 391 Ashland, Ky. 41114 ADDRESS P.O. Box 379 Branton, W.V. 24818

F-DRM, WW-5

COUNTY NAME PERMIT

WR-35
RECEIVED
 WV Division of
 Environmental Protection
 NOV 10 1994

4501208P

13-Jul-94
 API # 47-045-01208

State of West Virginia
 Division of Environmental Protection
 Section of Oil and Gas

Permitting
 Office of Oil & Gas

Well Operator's Report of Well Work

Farm Name: GEORGIA-PACIFIC CORP. Operator Well No.: D-59T-S-146551

Location: Elevation: 839.12 Quadrangle: CHAPMANVILLE

District: GUYAN County: LOGAN
 Latitude: 9325 Feet South of 37 Deg. 55 Min. 0 Sec.
 Longitude: 5950 Feet West of 82 Deg. 2 Min. 30 Sec.

Company: ASHLAND EXPLORATION, INC.
 P.O. BOX 391, AT-9
 ASHLAND, KY 41114-0391

Agent: B. E. Widener

Inspector: OFIE HELMICK
 Permit Issued: 07-18-94
 Well Work Commenced: 09-18-94
 Well Work Completed: 10-17-94
 Verbal Plugging _____
 Permission granted on: _____
 Rotary Cable _____ Rig _____
 Total Depth (feet) 710
 Fresh water depths (ft) 33'
 3" stream @ 60' Damp @ 420'
 Salt water depths (ft) None Noted

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 16"	41'	41'	Driven
8 5/8"	223'	223'	125
4 1/2"	704'	704'	191
2 3/8" @ 618' KB			

Is coal being mined in area (Y/N)? N
 Coal Depths (ft): None Noted

OPEN FLOW DATA

Producing formation Lee Sand Pay zone depth (ft) 588-608
 Gas: Initial open flow 760 MCF/d Oil: Initial open flow -- Bbl/d
 Final open flow 119 MCF/d Final open flow -- Bbl/d
 Time of open flow between initial and final tests 3 Hours
 Static Rock Pressure 160 psig (surface pressure) after 24 Hours

Second producing formation None Pay zone depth (ft) --
 Gas: Initial open flow -- MCF/d Oil: Initial open flow -- Bbl/d
 Final open flow -- MCF/d Final open flow -- Bbl/d
 Time of open flow between initial and final tests -- Hours
 Static Rock Pressure -- psig (surface pressure) after -- Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: Ashland Exploration, Inc.

By: James L. Stephens James L. Stephens, Eng. Tech.

Date: 11-02-94

Formation or Rock Type

Formation or Rock Type	Top	Base
Sand and Shale (base Lee Sand)	0	848
DTD 710		

Dump 260 gal 16% double inh. HCl-Fe acid. Load hole & pressure up to 900#. Perforate Lee Sand using 3 3/8" expendable guns w/3 3/8" JRC jets 4 holes per foot 831/600-608 and 171/688-692. Total 60 holes. Pressure up to 1100#. Acidized w/260 gal 16% HCl-Fe acid. BDP - 2240, ATP - 2230 @ 1/2 BPM, ISIP - 2000, 5 min - 1150, 10 min - 1010, 15 min - 940.

Chapmanville 8

2034
47-045-01208
Pland. cont. c. o. D-59
14,551

16" 71
5 7/8" e 223' cont

16" e 41' FW 33'

1 1/2" e 704' cont

FW e 60'

7/8" e 213'

-180

F.D. 710'

5w e 33'-60'-420

No con.

5 7/8" salt sand
5 7/8"

8 1/8" e 223' cont

608'
cut to surface
lec sand pres
3 Fr 500-
8 1/8" cont

FW e 420'

538' salt sand top

538' salt sand @ 538'

592'

600'

608' lec sand pres

1" e 704'

WW-4-A
Revised 6/07

1) Date: 5/28/2013
2) Operator's Well Number
146551 Island Creek Coal D-59
3) API Well No.: 47 045 - 01208
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 Heartwood Forestland Fund II ✓
Address 19045 Stone Mountain Road
Abingdon, VA. 24210

(b) Name _____
Address _____

(c) Name _____
Address _____

6) Inspector Ralph Triplett ✓
Address 5539 McCellan Hwy
Branchland, WV 25506
Telephone 304-389-0305

5) (a) Coal Operator:
Name None
Address _____

(b) Coal Owner(s) with Declaration
Name Raven Resources ✓
500 Lee St. E.
Address Suite 900
Charleston, WV 25301
Name Trace Creek Coal CO. ✓
Address P.O. Box Drawer 830
Belfry, KY 41514

(c) Coal Lessee with Declaration
Name Delbarton Mining Co. ✓
Address Alex Energy Inc.
P.O. Box Drawer 830
Belfry, KY 41514

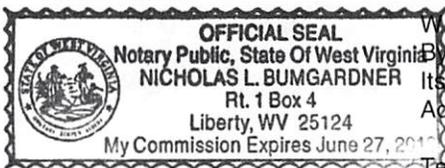
TO THE PERSONS NAMED ABOVE:

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:
By: _____
Its: _____
Address: _____
Telephone: _____

EQT Production Company
Victoria J. Roark ✓
Permitting Supervisor
PO Box 280
Bridgeport, WV 26330
(304) 848-0076

Received

Subscribed and sworn before me this 28 day of MAY 2013
My Commission Expires: 6/27/2010 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 depprivacyofficer@wv.gov.

4501208P

WW2-A

Additional Coal Owners:

✓
Pocahontas Land Corp.
P.O. Box 1517
Bluefield, WV 24701

Received

JUN 5 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-9
Revised 2/03

Page ____ of ____
2) Operator's Well Number
146551 Island Creek Coal D-59
3) API Well No.: 47 045 - 01208

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: Crawley Creek Quadrangle: Chapmanville 7.5'
Elevation: 843' County: Logan District: Guyan

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.? 30 ml

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.

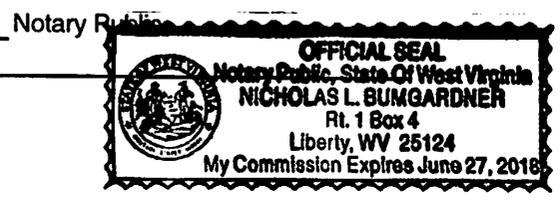
Company Official Signature *Victoria Roark*

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

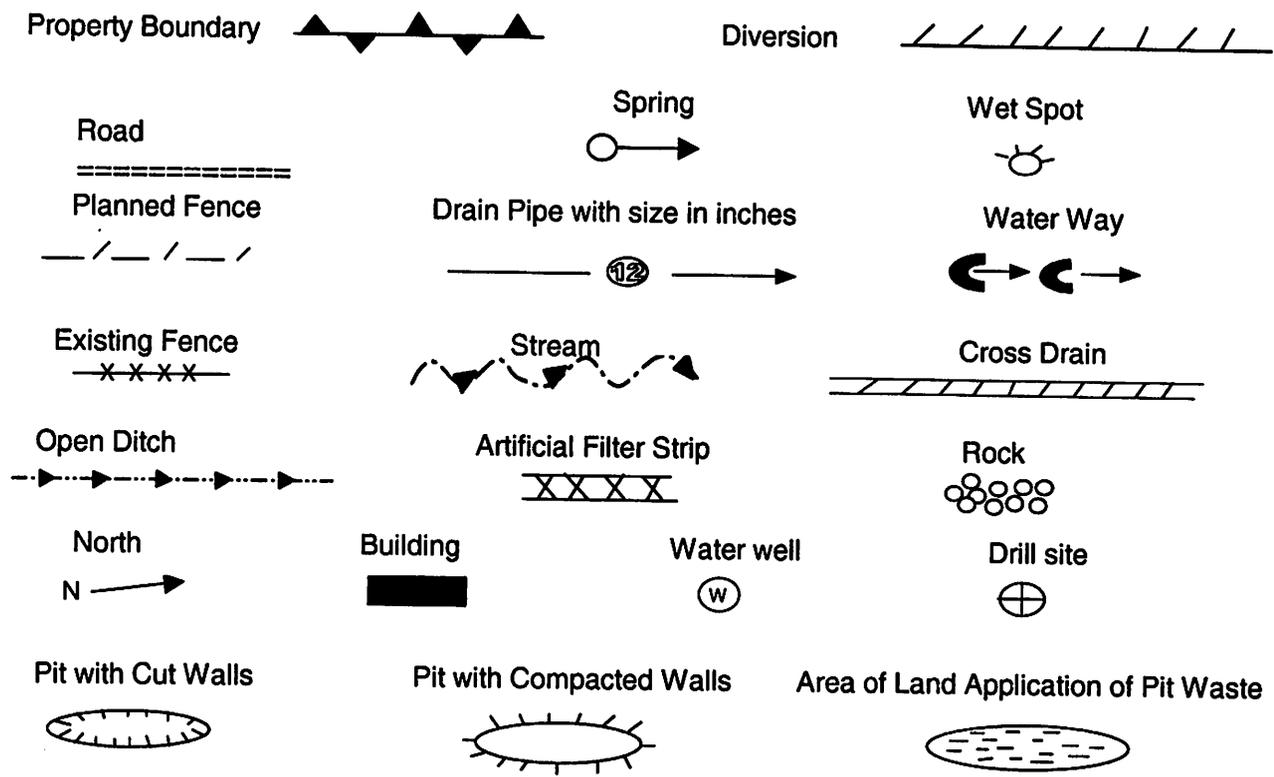
Subscribed and sworn before me this 28 day of MAY, 2013

My Commission Expires 6/27/2015



OPERATOR'S WELL NO.:
146551 Island Creek Coal D-59

LEGEND



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8
 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
KY-31	40	Orchard Grass	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: Ralph D. Tripicci

Comments: _____

Title: _____ Date: June 14, 2013
 Field Reviewed? Yes No

MUWV FAX-A-LOCATE SYSTEM INPUT FORM

WV 146551

Attention: Use of this system is a privilege limited to registered users adhering to the following guidelines:

- (1) Use limited to routine requests (48 hr. advance notification, excluding weekends and holidays). All other locate requests must be called in to 800-245-4848
- (2) Users must allow an additional 2 hours processing time for a total of 50 hours minimum lead-time.
- (3) Forms other than this one will not be accepted
- (4) Forms with insufficient or vague information will be returned for correction
- (5) Failure of any user to follow these guidelines can result in the loss of this privilege

FAX COMPLETED FORM TO (800) 217-3720 PLEASE TYPE OR PRINT LEGIBLY

CALLER _____ TELEPHONE # _____

FAX# _____ COMPANY NAME **EOT PRODUCTION COMPANY, INC.**

CO ADDRESS _____ CITY _____

WORKDATE _____ START TIME _____

COUNTY Logan TOWN _____

WORKING WITHIN CORPORATE LIMITS OF TOWN? YES ___ or NO X

WORK SITE ADDRESS SEE REMARKS

NEAREST INTERSECTING ST County Route 73 and US Route 119

WHEN PHYSICAL ADDRESS PROVIDED; IS EXCAVATION DIRECTLY AT ABOVE ADDRESS?
YES ___ or NO ___ If no; excavation length beyond work site address ___ (Ft, Yds, Mi) and direction ___ (N,S,E,W)

When only intersection provided as work site location (no address #) Must answer the questions below:

- A. LOCATE TO BEGIN OR INCLUDE INTERSECTION? YES ___ or NO X
Total Excavation Length To and Including Intersection ___ (Ft, Yds, Mi) direction ___ (N,S,E,W)
- B. LOCATE TO BEGIN A DISTANCE FROM AN INTERSECTION? YES X or NO ___
If YES, How far 1.98 MILES (Ft, Yds, Mi) in what direction NORTH (N,S,E,W)
- C. WILL EXCAVATION LENGTH CONTINUE BEYOND THIS POINT? YES Y or NO ___
If YES, How far 1.53 MILES (Ft, Yds, Mi) in what direction WEST (N,S,E,W)

LATITUDE AND LONGITUDE GRIDS (GPS/GRID ID#) SEE EXHIBIT B

EXCAVATION DEPTH VARIES AREA MARKED IN WHITE? YES BLASTING? UNKNOWN

TYPE OF WORK _____

LOCATE: ST ___ SIDEWALK ___ PRIV PROP X FRONT ___ REAR ___ SIDES ___
OTHER _____

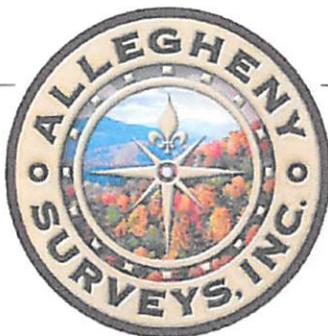
WORKING FOR _____ CONTACT PERSON _____

CONTACT PHONE # _____ ALT PHONE # _____

ALT CONTACT PERSON _____ ALT PHONE # _____

ADDITIONAL REMARKS SEE EXHIBIT A & B

Excavators are advised that there may be other underground facilities at their work area that are owned or operated by parties that are not members of MUWV and who must be contacted directly by the excavator.



**Miss Utility of West Virginia
(Exhibit A)
Directions to Gas Well No. WV 146551
API No. 47-045-01208**

- Beginning at US Route 119 in Chapmanville, WV, proceed south along US Route 119 approximately 7.9 miles arriving at the access road on the right (Point No. 1)
- Proceed northwest approximately 0.23 miles along the access road bearing left at Point No. 2
- Proceed South approximately 0.28 miles along the access road bearing right at Point No. 3
- Proceed northwest approximately 0.10 miles along the access road bearing right at Point No. 4
- Proceed northwest approximately 0.38 miles along the access road bearing right at Point No. 5
- Proceed northwest approximately 0.51 miles along the access road bearing right at Point No. 6
- Proceed northwest approximately 120 feet arriving at gas well WV 146551

BIRCH RIVER OFFICE
P.O. Box 438 • 237 Birch River Road
Birch River, WV 26610
phone: 304-649-8606
fax: 304-649-8608

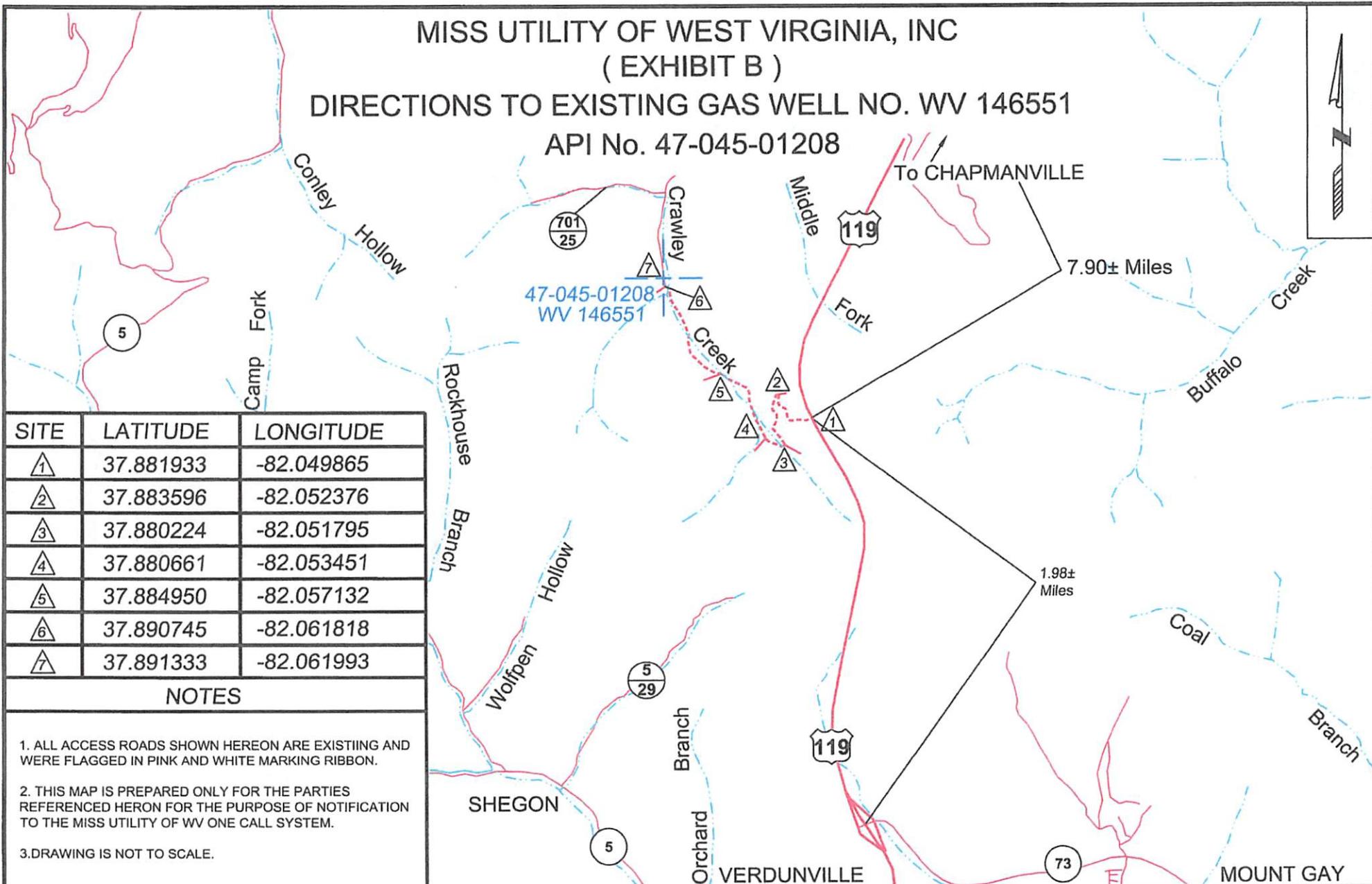
BRIDGEPORT OFFICE
172 Thompson Drive
Bridgeport, WV 26330
phone: 304-848-5035
fax: 304-848-5037

CALDWELL OFFICE
212 Cumberland Street
Caldwell, OH 43724
phone: 740-305-5007
fax: 740-305-5126

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

4501208P

MISS UTILITY OF WEST VIRGINIA, INC
 (EXHIBIT B)
 DIRECTIONS TO EXISTING GAS WELL NO. WV 146551
 API No. 47-045-01208



SITE	LATITUDE	LONGITUDE
①	37.881933	-82.049865
②	37.883596	-82.052376
③	37.880224	-82.051795
④	37.880661	-82.053451
⑤	37.884950	-82.057132
⑥	37.890745	-82.061818
⑦	37.891333	-82.061993

NOTES

1. ALL ACCESS ROADS SHOWN HEREON ARE EXISTING AND WERE FLAGGED IN PINK AND WHITE MARKING RIBBON.
2. THIS MAP IS PREPARED ONLY FOR THE PARTIES REFERENCED HERON FOR THE PURPOSE OF NOTIFICATION TO THE MISS UTILITY OF WV ONE CALL SYSTEM.
3. DRAWING IS NOT TO SCALE.



SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.
 1-800-482-8606
 P.O. BOX 438
 BIRCH RIVER, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

County:	Logan
District:	Guyan
Date:	May 6, 2013
Project No:	21-21-00-08
FILE No:	21-08 WV 146551 MU B

PREPARED FOR:
EQT PRODUCTION COMPANY, INC.
 P.O. Box 280
 Bridgeport, WV 26330