



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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Wednesday, October 11, 2017
WELL WORK PERMIT
Vertical / New Drill

EQT PRODUCTION COMPANY
120 PROFESSIONAL PLACE
BUILDING II
BRIDGEPORT, WV 26330

Re: Permit approval for PFS6V1
47-095-02448-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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: PFS6V1
Farm Name: EQT Production Company
U.S. WELL NUMBER: 47-095-02448-00-00
Vertical / New Drill
Date Issued: 10/11/2017

Promoting a healthy environment.

10/13/2017

T

9502448

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. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

10/13/2017



TECHNICAL DATA SHEET

Document Printed: November 28, 2014

ENTRY DATA

	Unit	Imperial	Metric	Unit
Outside Diameter	inches	4.500	114.3	mm
Nominal wall thickness	inches	0.250	6.4	mm
Type of Thread		Long Round	Long Round	
Grade		WTC 80	WTC 80	
Type of Product		Casing	Casing	
Standard API/High Collapse		Standard API Collapse	Standard API Collapse	
Nominal Weight per Foot	pounds	11.60	17.26	kg/m
Pipe Minimum Yield	ksi	80	552	MPa
Pipe Maximum Yield	ksi	110	758	MPa
Pipe Minimum Tensile	ksi	90	621	MPa
Coupling Minimum Yield	ksi	80	552	MPa
Coupling Maximum Yield	ksi	110	758	MPa
Coupling Minimum Tensile	ksi	100	689	MPa
Coupling or Joint Outside Diameter	inches	5.000	127.0	mm
Drift Diameter	inches	3.875	98.4	mm
Plain End Weight per Foot	pounds	11.36	5.15	kg
Internal Yield	psi	7780	53640	kPa
Collapse Pressure	psi	6360	43850	kPa
High Collapse Pressure	psi	N/A	N/A	kPa

MAXIMUM DEPTH/LENGTH BASED ON MUD WTS & SAFETY FACTORS

Drilling Mud Weight	ppg	9.625	1.153	kg/l
Tension Safety Factor		1.80	1.80	
Maximum Tension Length	feet	9630	2940	m
Internal Yield Safety Factor		1.10	1.10	
Maximum Depth for Internal Yield	feet	14150	4310	m
Collapse Safety Factor		1.125	1.125	
Maximum Setting Depth	feet	11310	3450.0	m

API RELATED VALUES and INTERMEDIATE CALCULATION RESULTS

Coupling Thread Fracture Strength	pounds	464000	210430	kg
Pipe Thread Fracture Strength	pounds	201000	91160	kg
Buttress Thread Strength	pounds	N/A	N/A	kg
Pipe Body Plain End Yield	pounds	267000	121090	kg
PullOut Strength	pounds	219000	99320	kg
Nominal Make-Up Torque	feet-pounds	2190	2970	N-m
Coupling Internal Yield	psi	10650	73430	kPa
Pipe Body Internal Yield	psi	7780	53641	kPa
Leak @ E1 or E7 plane	psi	17920	123550	kPa
Pipe Hydrostatic Test Pressure for Plain End	at 80% SMYS	7100	48950	kPa

WTC GENERAL INPUT CRITERIA

Coupling Color Code		Red	Red
Coupling Color Code for the band		Brown or Green	Brown or Green
Coupling API 5CT specification		N80Q L80 T1	N80Q L80 T1
Pipe Color Code Identification	2" Band(s)	Yellow and Red	Yellow and Red
Pipe Inspection	PSL	1	1
Certification	MTR	Yes	Yes

Note:

This information is general data. It is not a warranty, MTR, quality certificate, or similar.

WTC has the right to change this data at any time as an improvement of the product design.

This is a non-controlled document



Proposed Well Work and Fracturing Methods

WW-2B Form Attachment

12) Describe proposed well work and fracturing methods in detail:

- Drill and complete a new vertical well in multiple formations. Drill the vertical to an approximate depth of 2858'. Run 4.5" Casing and Cement.
- Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.1%) of chemicals (including 15% Hydrochloric acid, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately ~~7700 psi~~, *6613 PSI* maximum anticipated treating rates are expected to average approximately 60 bpm. Average approximately 100,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 *9MM* mesh. Average approximately 100,000 pounds of proppant per stage.

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection

10/13/2017

WW-2A
(Rev. 6-14)

1.) Date: 4/19/2017
2.) Operator's Well Number PFS6V1
State 47- County 095 Permit -
3.) API Well No.:

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name EQT Production Company
Address 115 Professional Place
Bridgeport, WV 26330
(b) Name Florence Anna Leek LEASE ROAD
Address 5385 Elk Fork Road
Middlebourne, WV 26149
(c) Name _____
Address _____
5) (a) Coal Operator
Name N/A
Address _____
(b) Coal Owner(s) with Declaration
Name N/A
Address _____
(c) Coal Lessee with Declaration
Name N/A
Address _____
6) Inspector Derek M. Haught
Address P.O. Box 85
Smithville, WV 26178
Telephone (304) 206-7613

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 23 on the above named parties by:

- Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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 and imprisonment.



Well Operator EQT Production Company
By: Victoria J. Roark *[Signature]*
Its: Permitting Supervisor
Address: 115 Professional Place
Bridgeport, WV 26330
Telephone: (304) 848-0076
Email: vroark@eqt.com

Subscribed and sworn before me this 20 day of April, 2017

Rebecca L. Wanstreet Notary Public
My Commission Expires 4-7-2020

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 10/13/2017

WW-2A / 3A Surface Waiver

SURFACE OWNER WAIVER

County Tyler Operator EQT Production Company Operator well number PFS6V1

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A / 3A

The well operator named on page WW-2A / 3A is applying for a permit from the State to do oil or gas well work. (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 FIFTEEN (15) 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.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

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 Well Work Permit on Form WW2-A / 3A, and attachments consisting of pages 1 through ___ including a work order on Form WW-2B / 3A, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name EQT Production Company By Jason M. Ranson Date 4/27/17 Its Attorney-in-fact

Print Name

Signature Date

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
LEASE # 871065 - EQT Production Company, et al (Current Royalty Owner)		* *	
Below Onondaga			
Mary Maxine Welch and Mary Anne Ketelsen (original lessor)	JB Exploration LLC		398/354
Jay-Bee Exploration I LLC (JB Exploration LLC)	EQT Production Company		547/818
Above the Onondaga			
Mary Maxine Welch and Mary Anne Ketelsen (original lessor)	JB Exploration LLC		398/354
JB Exploration I, LLC (JB Exploration LLC)	Statoil USA Onshore Properties Inc.		509/746
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		470/668
SWN Exchange Titleholder LLC	SWN Production Company, LLC		9/404
SWN Production Company, LLC	EQT Production Company		562/241
Mary Maxine Welch and Mary Anne Ketelsen (original lessor)	JB Exploration LLC		398/354
JB Exploration I, LLC (JB Exploration LLC)	Statoil USA Onshore Properties Inc.		509/746
Statoil USA Onshore Properties Inc.	EQT Production Company		539/239

* * Per West Virginia Code Section 22-6-8

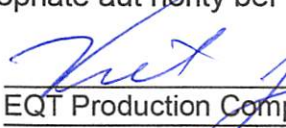
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the proposed activity is initiated.

Well Operator:
By: Its:


 Office of Oil and Gas
 APR 24 2017
 EQT Production Company
 Permitting Supervisor
 WV Department of Environmental Protection
 10/13/2017

WW-2B1
(5-12)

Well No. PFS6V1

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Fairway Laboratories, Inc.

Sampling Contractor Fairway Laboratories, Inc.

Well Operator EQT Production Company

Address 115 Professional Place

Bridgeport, WV 26330

Telephone (412) 553-5700

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection 10/13/2017



Sample Request Memo Letter sent to Landowners

RE: Parcel #

To Whom It May Concern:

Jericho Land Resources LLC has been contracted by EQT Production Company (EQT) to do some preliminary work for a proposed oil and gas well permit application.

The West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas, requires gas well operators to offer pre-drill water testing for existing water wells or developed springs actually used by the surface owner or water purveyor for consumption by humans or domestic animals. EQT's standard practice to offer water testing to a radius of 2,500 feet from the proposed gas well location.

EQT hereby notifies you (the surface owner and/or water purveyor) of the following:

- Your right to request sampling and analysis;
- The rebuttable presumption for contamination or deprivation of a fresh water source or supply;
- That refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability;
- Your independent right to sample and analyze any water supply at your own expense;
- That EQT will utilize an independent laboratory to analyze any sample;
- That you can obtain from the WVDEP Chief, Office of Oil and Gas, a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Therefore, EQT offers, at no charge to you, water testing of your water supply(s). Results of these tests will be sent to you upon our receipt from the independent testing laboratory.

Please notify Jericho Land Resources LLC at your earliest convenience if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the well number may be referenced.

Thank you for your cooperation in this matter.

Jericho Land Resources LLC
200 RIDC Park West Drive, Suite 202
Pittsburgh, PA 15275
412-407-5263
water@jericho-row.com

Date: _____

Left/sent by: _____

EQT Well Number: _____

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your water well, spring, or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined.

Name (please print): _____

Address: _____

Signature: _____

Date: _____

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection 10/13/2017



Notice to Surface Owner or Resident

Vertical Shallow Well #PFS6V1– Tyler County

The initial mapping review of the area surrounding the proposed vertical shallow well site identified the below listed Surface Owner or Resident that is potentially utilizing a water well or spring for human consumption, domestic animals, or other general use and of which is located within a 2,500' radius of the proposed vertical shallow well site. The following Surface Owner or Resident will be notified of the opportunity to request a water sample and analytical testing should it be necessary.

Surface Owner or Resident Notified:

Owner: * Karen J. Wolf
 Address: 5207 Elk Fork Road, Middlebourne, WV 26149
 Phone: 972-896-2391
 Parcel #: 02-11-29.1
 Comments: A potential water well was identified in backyard of residence on parcel. A Sample Request Memo Letter was certified mailed to Landowner on 3/16/2017 who responded on 3/20/2017 saying that they would like water source sampled and tested.

Owner: Florence Anna Leek
 Address: 5385 Elk Fork Rd, Middlebourne, WV 26149
 Phone: 304-758-4440
 Parcel #: 02-11-28
 Comments: Initial contact was made to a Mrs. Leek who indicated parcel is her son's farm. Mrs. Leek indicated 3 water wells but contact must be made with her son, Milo. Multiple phone attempts and knocking on door was made with no success to inquire about 3 water wells. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017 with no response.

Owner: Darrell J. & Gary A. Sole & Karen J. Wolf
 Address: 73 Lonetree Rd, Middlebourne, WV 26149
 Phone: 304-758-4763 (Note that this # is for Gary Sole)
 Parcel #: 02-11-23
 Comments: Tenant indicated 2 water wells on parcel which were field identified. 1 was being utilized and the other is not in use. Tenant indicated to contact owner(s) / landlord(s). Multiple attempts of contact were made to the owner(s) / landlord(s) with no success. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017 with no response. Must speak with Gary Sole (Landlord). This well not in use anymore. Tenant/LO no longer uses this well. She indicated the pump has been removed.

Owner: Kathryn L. Ritchea
 Address: RR 1 Box 222, Middlebourne, WV 26149
 Phone: 304-758-2029
 Parcel #: 02-11-28.1
 Comments: A potential water well was field identified near road and in front yard of residence. Multiple attempts via phone and knocking on door was made with no success of contact to inquire about water source. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017. Landowner contacted via phone on 4/5/2017. Follow up call on 4/6/2017 and left voicemail.

Owner: Patricia Anderson
Address: 5438 Elk Fork Road, Middlebourne, WV 26149
Phone: N/A
Parcel #: 02-11-28.2
Comments: A water pump faucet was located near road and in front yard of residence. Knock on door was made with no success and no phone number was found. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017 with no response.

Owner: Gary Sole
Address: 5331 Elk Fork Road, Middlebourne, WV 26149
Phone: 304-758-4763
Parcel #: 02-11-29
Comments: A potential water well was identified near shed and round bales. A hose was attached serving a cistern for livestock. Multiple attempts via phone and knocking on door was made with no success of contact to inquire. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017 with no response.

Owner: William L. Neff
Address: 5201 Elk Fork Road, Middlebourne, WV 26149
Phone: 304-386-4465
Parcel #: 02-11-30.1
Comments: A potential water well was identified beside porch of residence on parcel. Multiple attempts via phone and knocking on door was made with no success of contact to inquire about water source. A Sample Request Memo Letter was also certified mailed to Landowner on 3/16/2017 with no response.

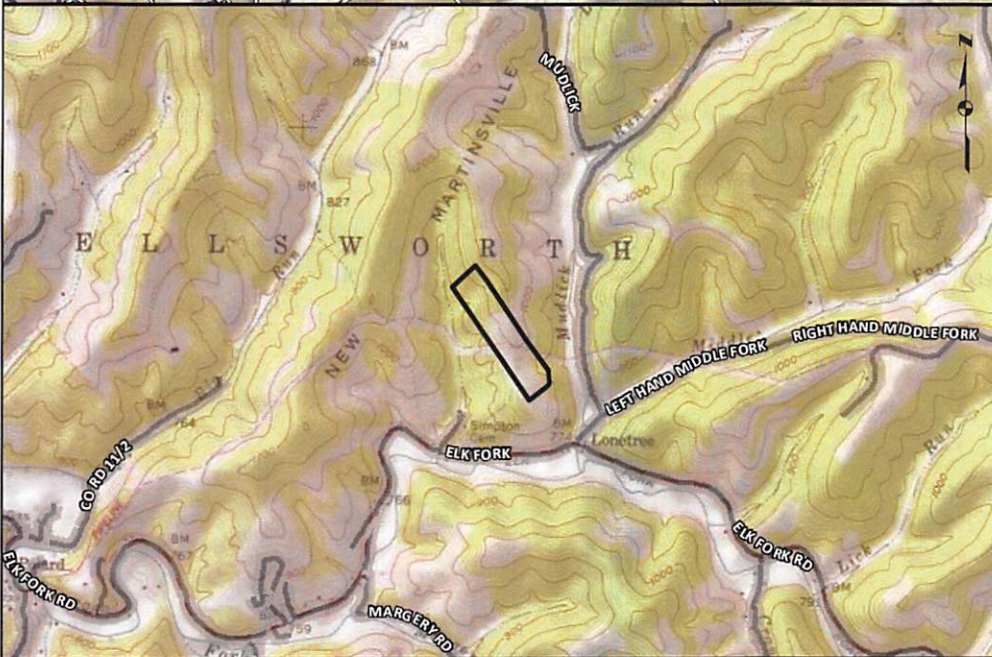
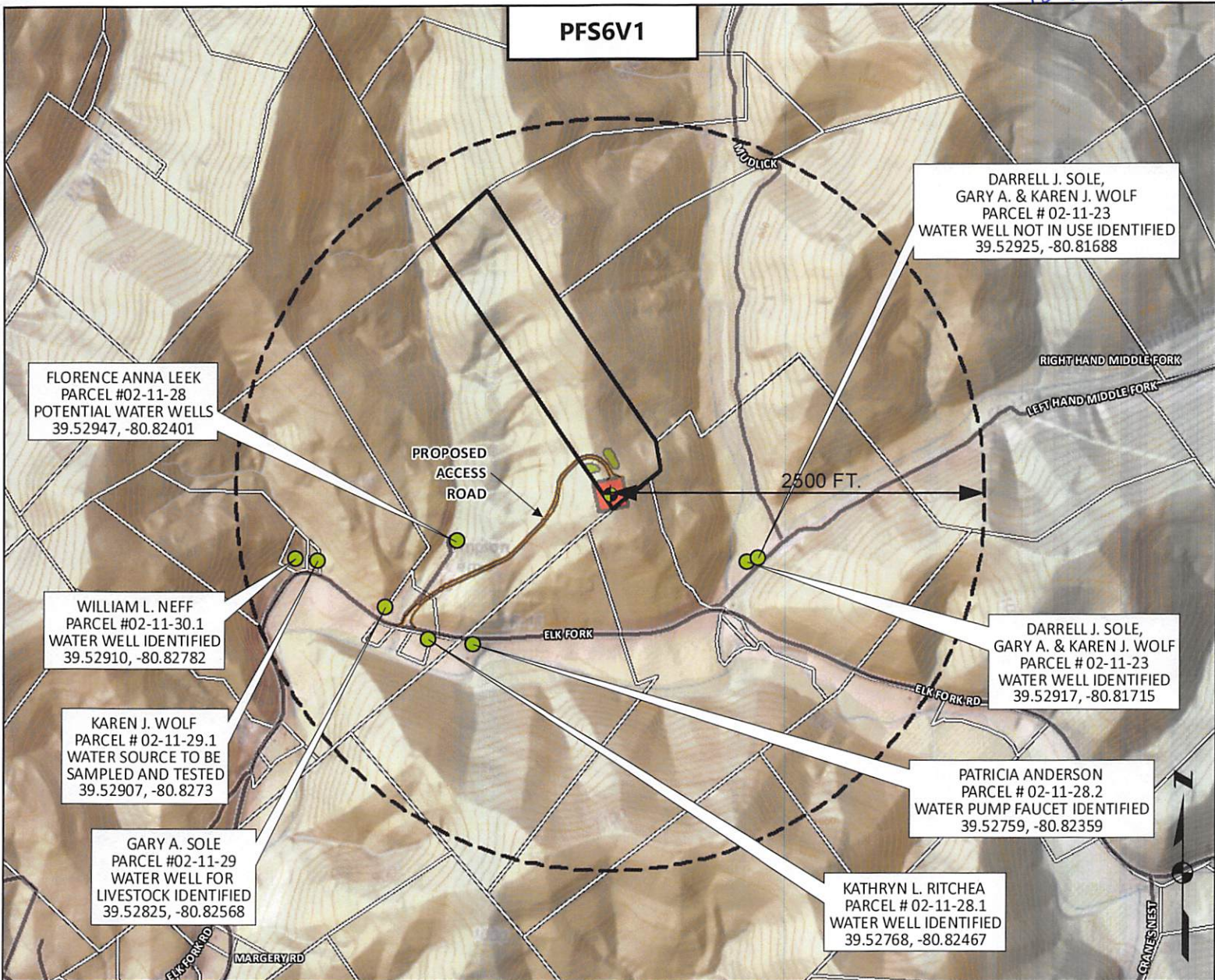
Owner: Maurice J. Carlisle & Ralph D. Thacker
Address: 20021 Thacker Dr., Boonsboro, MD 21713
Phone: 301-432-7621 (Ralph)
Parcel #: 02-11-9
Comments: No wells in use and no visible signs of livestock, however, a Sample Request Memo Letter was certified mailed to Landowner on 3/31/2017. Spoke to Landowner via phone on 4/6/2017 who indicated no wells or livestock on parcel.

Owner: Stanley Jr. & Helen Ann Satkowski
Address: 5775 Elk Fork Rd, Middlebourne, WV 26149
Phone: N/A
Parcel #: 02-11-24
Comments: No wells in use and no visible signs of livestock, however, a Sample Request Memo Letter was certified mailed to Landowner on 3/31/2017.

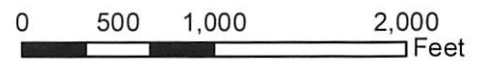
Owner: William M. & Sovil Blanche Murner (aka Melvin W. Murner)
Address: 5798 Elk Fork Road, Middlebourne, WV 26149
Phone: 304-758-4635
Parcel #: 02-11-25
Comments: No wells in use and no visible signs of livestock, however, a Sample Request Memo Letter was certified mailed to Landowner on 3/31/2017. Melvin W. Murner responded to Letter by signing it on 4/8/2017 stating they did not want any water sources sampled and tested.

Owner: Roger Eddy Jr.
Address: 6072 Elk Fork Rd, Middlebourne, WV 26149
Phone: N/A
Parcel #: 02-11-53
Comments: No wells in use and no visible signs of livestock, however, a Sample Request Memo Letter was certified mailed to Landowner on 3/31/2017.

PFS6V1



1 inch = 1,000 feet



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATION. SEPARATE PERMITS MAY BE REQUIRED BY THE WV D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY ACTIVATION FROM THIS LOCATION.

RECEIVED

Office of Oil and Gas

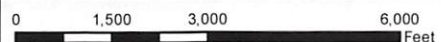
TEMPORARY SEED AND MULCH SLOPES AFTER CONSTRUCTION OF LOCATION.

Dmt 4-18-17

APR 24 2017
CUT & STACK ALL MARKETABLE TIMBER.

STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL

WV Department of
Environmental Protection
10/13/2017



TOPO SECTION OF PORTERS FALLS 7.5 USGS TOPO QUADRANGLE

9502448

WW-9
(5/16)

API Number 47 - 095 -
Operator's Well No. PFS6V1

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

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Outlet Middle Island Creek Quadrangle Porters Falls 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: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

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 Various)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

DMH
4-15-17

Will closed loop system be used? If so, describe: Yes, the closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud

Additives to be used in drilling medium? See Attached

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

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

-Landfill or offsite name/permit number? See Attached List

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 *Victoria J. Roark*

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

RECEIVED
Office of Oil and Gas

Subscribed and sworn before me this 20 day of April, 2017 APR 24 2017

Sheela Wanstreet

My commission expires 4-7-2020





Drilling Medium & Additives to be Used

WW-9 Form Attachment

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

- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air – biodegradable oil lubricant, detergent, defoaming, water.
- Water based mud – barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates.
- Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

DmH
4-19-17

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection
10/10/2017

Proposed Revegetation Treatment: Acres Disturbed No Additional Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10 - 20 - 10

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

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: [Signature]

Comments: _____

Title: Oil + Gas Inspector

Date: 4-19-17

Field Reviewed? Yes No

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection

10/13/2017



EQT Production Water Plan - Offsite Disposals for Marcellus Wells

WW-9 Form Attachment

CWS TRUCKING INC.

P.O. Box 391
Williamstown, WV 26187
740-516-3586
Noble County / Noble Township
Permit # 3390

LAD LIQUID ASSETS DISPOSAL INC.

226 Rankin Road
Washington, PA 15301
724-350-2760
724-222-6080
724-229-7034 fax
Ohio County / Wheeling
Permit # USEPA WV 0014

**TRI COUNTY WASTE WATER
MANAGEMENT, INC.**

1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County / Waynesburg
Permit # TC-1009

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

BROAD STREET ENERGY LLC

37 West Broad Street, Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County / Belpre TWP.
Permit # 8462

TRIAD ENERGY

P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County / Jackson Township
Permit # 4037

KING EXCAVATING CO.

Advanced Waste Services
101 River Park Drive
New Castle, Pa. 16101
Facility Permit# PAR000029132

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

RECEIVED
Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection

10/13/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: EQT Production Company
Watershed (HUC 10): Outlet Middle Island Creek Quad: Porters Falls 7.5'
Farm Name: _____

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

N/A

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

N/A

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

N/A

4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A

RECEIVED
Office of Oil and Gas
APR 24 2017

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

WV Department of
Environmental Protection
10/13/2017

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

N/A

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

N/A

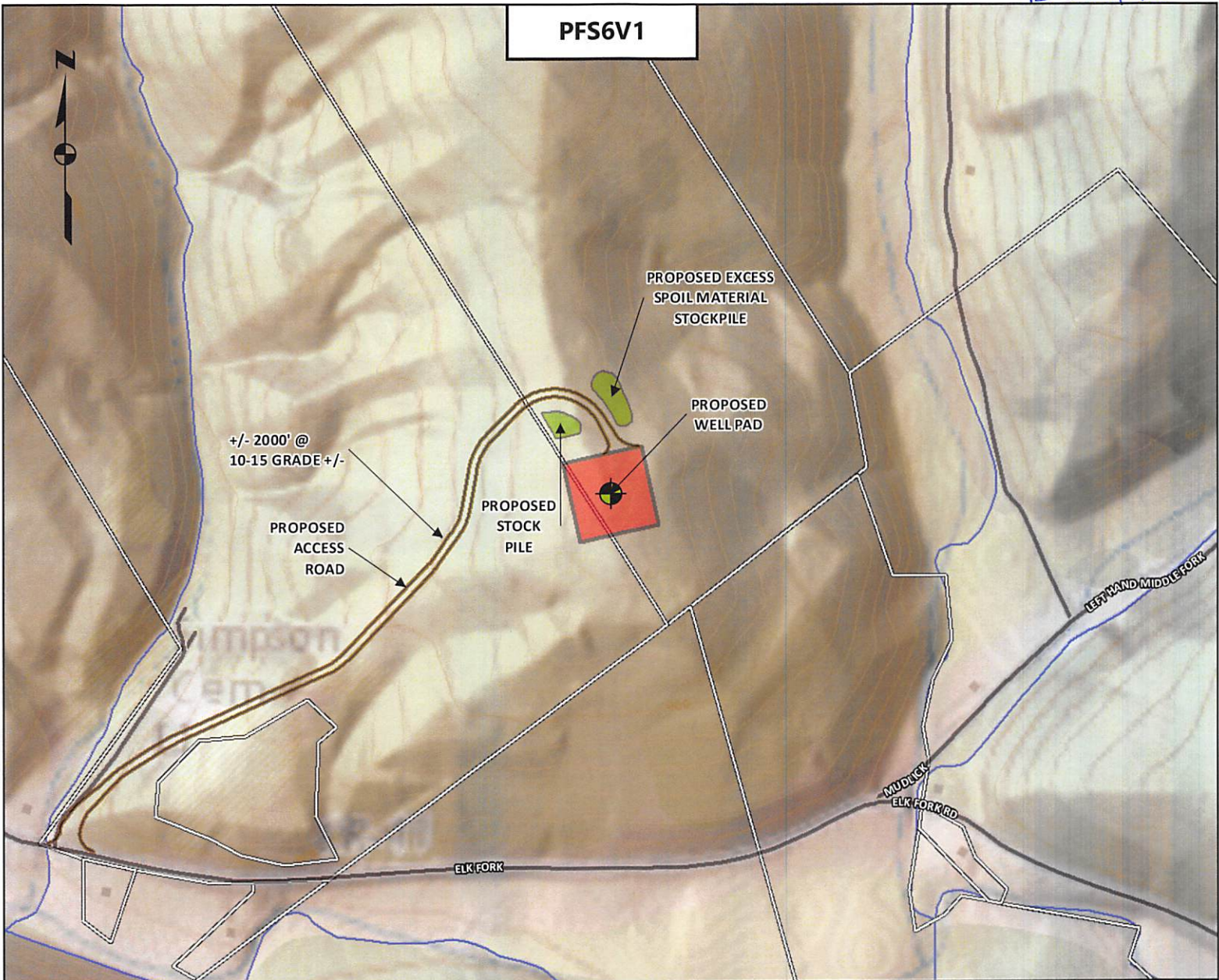
8. Provide provisions and frequency for inspections of all GPP elements and equipment.

N/A

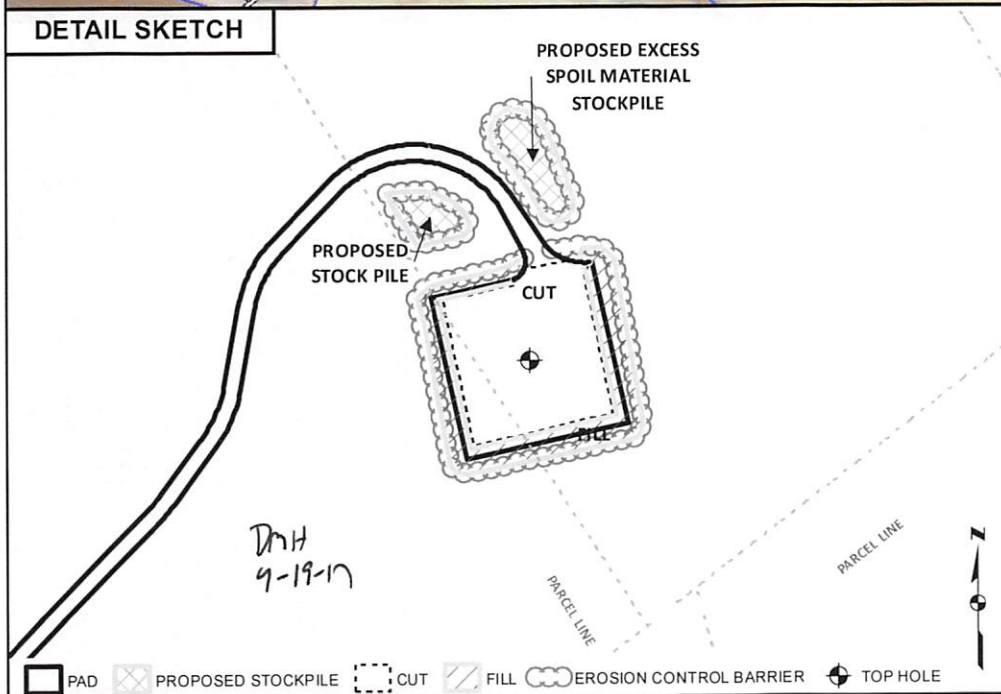
Signature: _____

Date: _____

PFS6V1



DETAIL SKETCH



1 inch = 375 feet



ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATION. SEPARATE PERMITS MAY BE REQUIRED BY THE WV D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

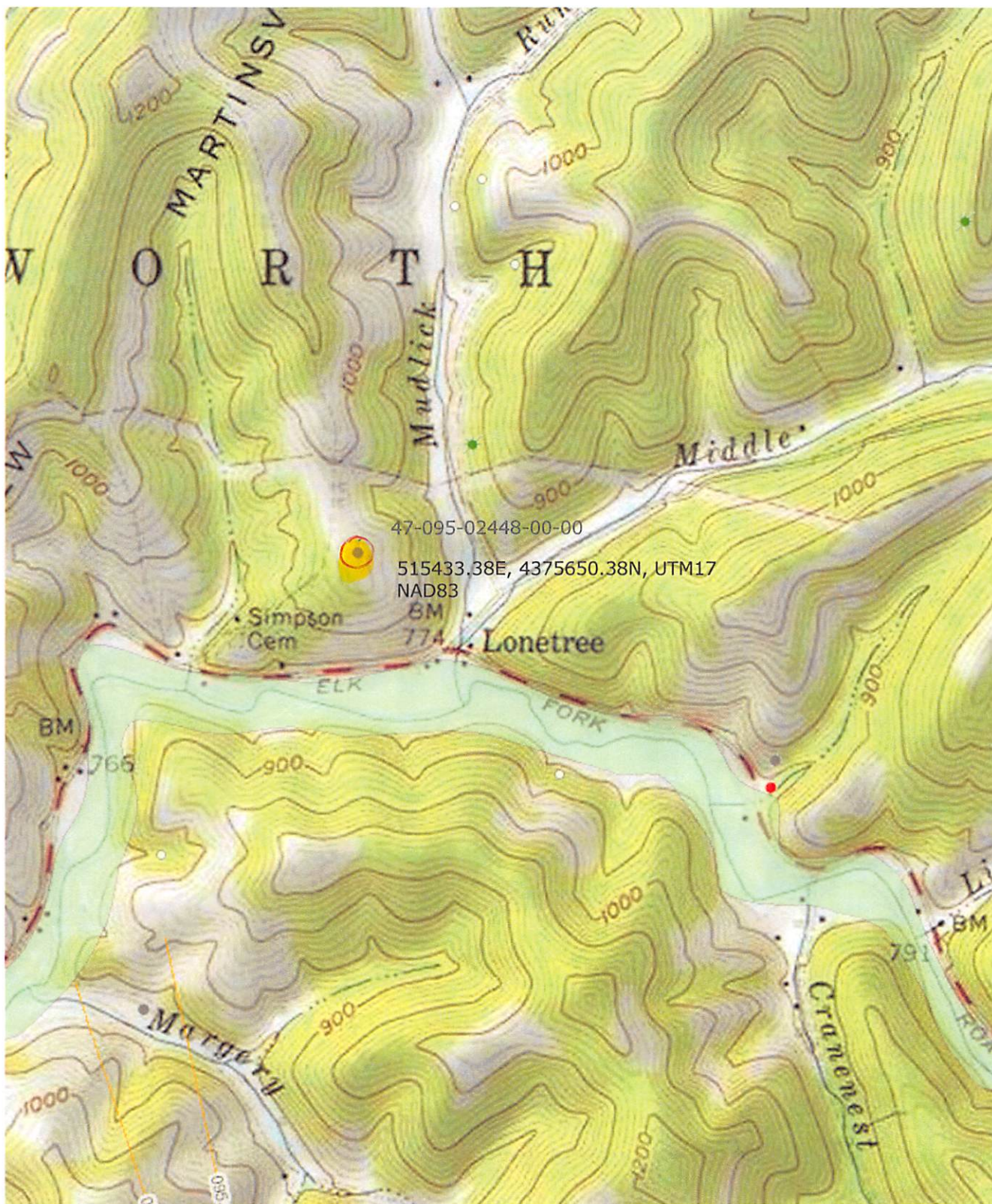
EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF EROSION CONTROL.

RECEIVED
Office of Oil and Gas
CUT & STACK ALL MARKETABLE TIMBER.
STACKED BRUSH MAY BE USED FOR SEDIMENT CONTROL.

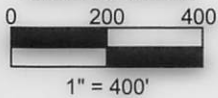
APR 24 2017
NO PIT WILL BE UTILIZED. TREATED WASTE TO BE REUSED OR TRANSPORTED OFFSITE TO APPROVED DISPOSAL LOCATIONS.

WV Department of Environmental Protection
10/13/2017
SERVICE LAYER CREDITS: USGS THE NATIONAL MAP, NATIONAL BOUNDARIES DATASET, NATIONAL ELEVATION DATASET, GEOGRAPHIC



10/13/2017

GRAPHIC SCALE



PFS6V1
PFS6
EQT Production Company

NAD'83 GEO. (DD°MM'SS.SS") N. 39° 31' 49" W. 80° 49' 14"
NAD'83 DECIMAL DEGREES N. 39.530369° W. 80.820419°
NAD'83 UTM (M) ZONE 17 NORTH N. 4375650.38 E. 515433.38
NAD'83 S.P.C. (W.V. NORTH ZONE- USFT) N. 378026.6 E. 1596080.3

8168'
LATITUDE 39°32'30"
LONGITUDE 80°47'30"

LEGEND

- MONUMENT FOUND AS NOTED
 - ▲ WELL NO. PFS6V1 (PROPOSED)
 - ⊗ EXISTING WATER WELL
 - LEASE BOUNDARY LINE
 - - - SURFACE BOUNDARY LINE
- SOURCES FOR BEARINGS AND DISTANCES:
(()) PLAT DB 343 P 1
() DEED DB 465 P 127
NONE SURVEYED

J. MAURICE
CARLISLE & D.
RALPH THACKER
PARCEL ID 02-11-7

J. MAURICE
CARLISLE & D.
RALPH THACKER
PARCEL ID 02-11-10

J. MAURICE
CARLISLE & D.
RALPH THACKER
PARCEL ID 02-11-9

EQT PRODUCTION
COMPANY
PARCEL ID 02-11-8
LEASE #: 871065

HEARTWOOD
FORESTLAND FUND II LP
PARCEL ID 02-11-13

FLORENCE ANNA LEEK
PARCEL ID 02-11-28

GARY A. SOLE
PARCEL ID 02-11-29

FOUND
5/8" REBAR W/CAP
"HUGHES - LLS632
ELLENBORO - WV"

FOUND
5/8" REBAR W/CAP
"HUGHES - LLS632
ELLENBORO - WV"

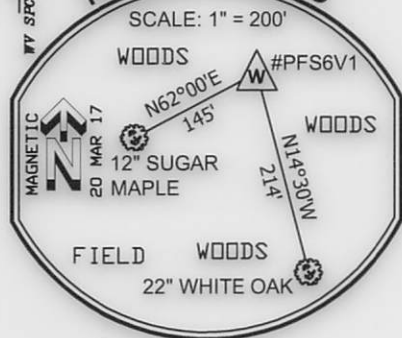
FOUND
5/8" REBAR W/CAP
"HUGHES - LLS632
ELLENBORO - WV"

DARRELL J &
GARY A SOLE &
KAREN J WOLF
PARCEL ID
02-11-23

GARY SOLE
PARCEL ID 02-11-27

GARY SOLE
PARCEL ID 02-11-26

REFERENCES



NOTES ON SURVEY

1. PREPARED BY:
JERICHO LAND RESOURCES, LLC
200 RIDC PARK WEST DRIVE, SUITE 202
PITTSBURGH, PA 15275
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM
DEED BOOK 465 PAGE 127.
3. THIS IS NOT A BOUNDARY SURVEY. SURFACE
OWNER AND ADJOINER INFORMATION TAKEN FROM
THE ASSESSOR AND COUNTY CLERK RECORDS OF
TYLER COUNTY IN APRIL 2017

OPERATORS WELL NO: PFS6V1
SCALE: 1" = 400'
MINIMUM DEGREE
OF ACCURACY: SUB-METER
PROVEN SOURCE
OF ELEVATION: CORS NETWORK & WV VRS

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

47 095 02448
API WELL NO. STATE COUNTY PERMIT



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 LAW AND THE REGULATIONS ISSUED
AND PRESCRIBED BY THE DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Signed: *Calvin J. Martin*

P.L.S.: 2150 DATE: 04/18/2017

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
OFFICE OF OIL AND GAS
601 57TH ST. SE
CHARLESTON, WV 25304



WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP
 GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: OUTLET MIDDLE ISLAND CREEK ELEVATION: 981.5'

DISTRICT: ELLSWORTH COUNTY: TYLER QUADRANGLE: PORTERS FALLS 7.5'

SURFACE OWNER: EQT PRODUCTION COMPANY ACREAGE: 39.411 +/-

OIL & GAS ROYALTY OWNER: EQT PRODUCTION COMPANY, et al ACREAGE: 39.411 +/-

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: WEIR, GANTZ, GORDON STRAY ESTIMATED DEPTH: TVD 2858'

WELL OPERATOR: EQT PRODUCTION COMPANY DESIGNATED AGENT: REX C. RAY
ADDRESS: 115 PROFESSIONAL PLACE ADDRESS: 115 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

10/13/2017