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

November 19, 2015

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-10303140, 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 513494
Farm Name: MILLER, VIRGINIA HEIRS
API Well Number: 47-10303140
Permit Type: Horizontal 6A Well
Date Issued: 11/19/2015

Promoting a healthy environment.

API Number: 47 103 03140

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. 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 § 22-6A-5a (12), 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.

4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.

5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations,* 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, 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.

WW - 6B
(4/15)

4710303140

API NO. 47 - 103 -
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

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

1) Well Operator: EQT Production Company

306686	103	05	548
Operator ID	County	District	Quadrangle

2) Operator's Well Number: 513494 Well Pad Name: PNG102

3) Farm Name/Surface Owner : Emma Virginia Miller Heirs Public Road Access: RT 250

4) Elevation, current ground: 1,178.0 Elevation, proposed post-construction: 1,146.0

5) Well Type: (a) Gas • Oil _____ Underground Storage _____

Other _____

(b) If Gas: Shallow • Deep _____

Horizontal •

DMH
9-4-15

6) Existing Pad? Yes or No: no

7) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):

Target formation is Marcellus at a depth of 6921 with the anticipated thickness to be 49 feet and anticipated target pressure of 2620 PSI

Marcellus top is 6904

8) Proposed Total Vertical Depth: 6921
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 13,192
11) Proposed Horizontal Leg Length 5,185
12) Approximate Fresh Water Strata Depths: 498, 523
13) Method to Determine Fresh Water Depth: By offset wells
14) Approximate Saltwater Depths: 1577, 1873
15) Approximate Coal Seam Depths: 502, 724, 896
16) Approximate Depth to Possible Void (coal mine, karst, other): None reported
17) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No _____

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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API NO. 47 - 103 -
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

CASING AND TUBING PROGRAM

18)

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill- up (Cu.Ft.)
Conductor	20	New	MC-50	81	40	47 10303140 40	38 C.T.S.
Fresh Water	13 3/8	New	J-55	54.5	673	673	596 C.T.S.
Coal	–	–	–	–	–	–	–
Intermediate	9 5/8	New	A-500	40	3,080	3,080	1,214 C.T.S.
Production	5 1/2	New	P-110	20	13,192	13,192	See Note 1
Tubing	2 3/8		J-55	4.6			May not be run, if run will be set 100' less than TD
Liners							

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TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	24	0.375	-	18	Construction	1.18
Fresh Water	13 3/8	17 1/2	0.38	2,730	2184	* See Note 2	1.21
Coal							
Intermediate	9 5/8	12 3/8	0.395	3,950	3160	* See Note 2	1.21
Production	5 1/2	8 1/2	0.361	12,640	10112	-	1.27/1.86
Tubing							
Liners							

Packers

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

Note 1: EQT plans to bring the TOC on the production casing cement job 1,000' above kick off point, which is at least 500' above the shallowest production zone, to avoid communication.
Note 2: Reference Variance 2014-17. (Attached)

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(10/14)

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API NO. 47 - 103 -
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 4180 then kick off the horizontal leg into the Marcellus using a slick water frac.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

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 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

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21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 73.28

22) Area to be disturbed for well pad only, less access road (acres): 39.52

23) Describe centralizer placement for each casing string.
- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One spaced every 1000' from KOP to Int csg shoe

24) Describe all cement additives associated with each cement type. **Surface (Type 1 Cement):** 0-3% Calcium Chloride Used to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.

Production:

Lead (Type 1 Cement): 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time. 0.3% CFR (dispersant). Makes cement easier to mix.
Tail (Type H Cement): 0.25-0.40% Lignosulfonate (Retarder). Lengthens thickening time. 0.2-0.3% CFR (dispersant). This is to make the cement easier to mix. 60 % Calcuim Carbonate. Acid solubility. 0.4-0.6% Halad (fluid loss). Reduces amount of water lost to formation.

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25) Proposed borehole conditioning procedures. **Surface:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.
Intermediate: Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration.
Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

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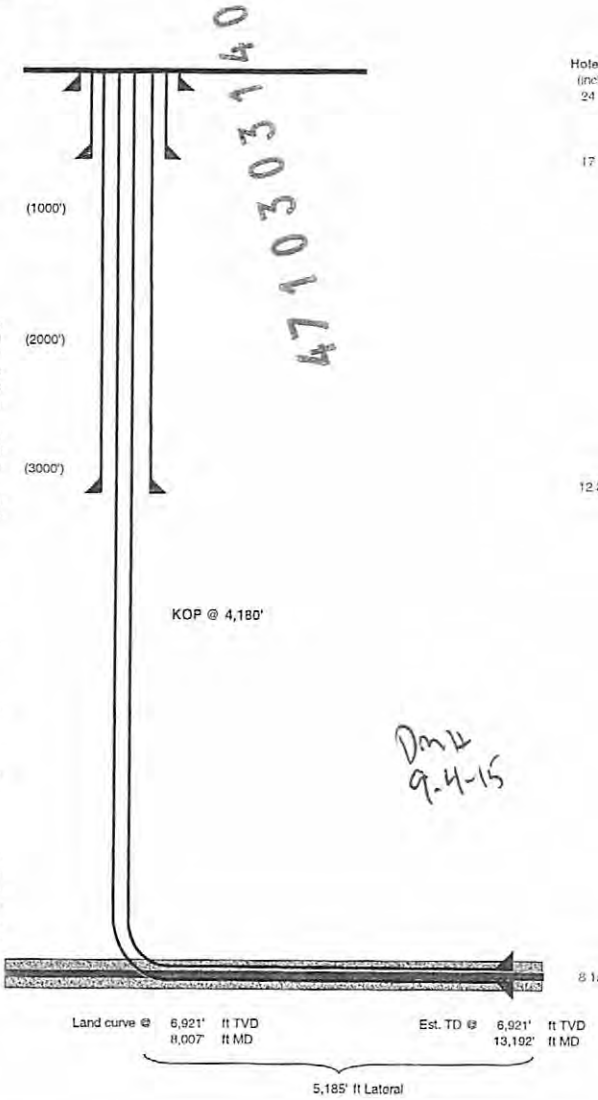
*Note: Attach additional sheets as needed.

4710303140

Well 513494 (PNG102H3)
EQT Production
Pine Grove
Wetzel **West Virgina**

Azimuth 152
Vertical Section 5224

TVD Depth (feet)	Formation Tops (TVD)		
0'			
250'			
500'	Base Fresh Water	523	
750'			
1,000'			
1,250'			
1,500'			
1,750'			
2,000'	Maxton	1783 -	1837
	Big Lime	2019 -	2068
2,250'	Weir	2258 -	2301
	-Gantz	2446 -	2500
2,500'	-Fifty foot	2572 -	2600
	-Thirty foot	2648 -	2651
2,750'	Base Red Rock	2672	
	-Gordon	2678 -	2746
3,000'	-Forth Sand	2769 -	2791
	-Bayard	2947 -	3030
3,250'	Int. cag pt	3050	
	-Warren	3385 -	3406
3,500'	-Speechley	3486 -	3495
3,750'			
4,000'			
4,250'			
4,500'	-Riley	4363 -	4391
4,750'			
5,000'	-Benson	4974 -	5165
5,250'			
5,500'	-Alexander	5349 -	5389
5,750'			
6,000'	-Sonyea	6526 -	6559
	-Middlesex	6659 -	6700
6,250'	-Genesee	6700 -	6782
	-Geneseo	6782 -	6807
6,500'	-Tully	6807 -	6828
	-Hamilton	6828 -	6904
6,750'	Marcellus top	6904	
	Target inside Marcellus	**6921**	
7,000'	Marcellus Bottom	6962	
7,250'			



Hole Size (inches)	Casing Type	Size (inches)	Wt (ppf)/Grade
24	Conductor	20	81#/MC-50
17 1/2	Surface	13 3/8	54.5#/J-55
12 3/8	Intermediate	9 5/8	40#/A-500
8 1/2	Production Casing	5 1/2	20#/P-110

Proposed Well Work:
Drill and complete a new horizontal well in the formation.
The vertical drill to go down to an approximate depth of 4180'.
Then kick off the horizontal leg into the using a slick water frac.

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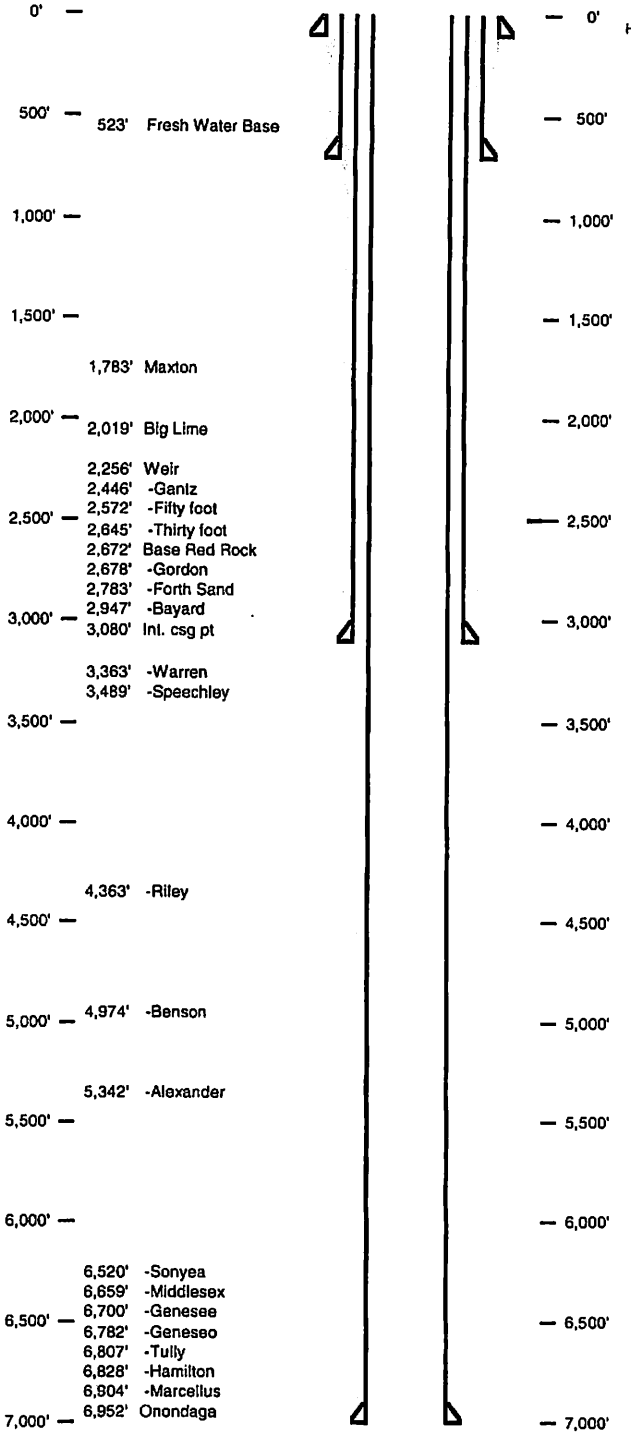
Well Schematic
EQT Production

47 10303140

Well Name	513494 (PNG102H3)
County	Wetzel
State	West Virgina

Elevation KB:	1159
Target	Marcellus
Prospect	
Azimuth	152
Vertical Section	5224



Hole Size 24" - 20" Conductor at 40'
Bit Size 17.5"

TOC @ Surface
13 3/8", MC-50, 54.5# @ 673' ft MD
Bit Size 12.375"

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TOC @ Surface
9 5/8", MC-50, 40# @ 3,080' ft MD
Bit Size 8.5"

KOP = 4,180' ft MD
10 Deg DLS

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Land @ 8,007' ft MD
6,921' ft TVD

5 1/2", P-110, 20# 13,192' ft MD
6,921' ft TVD

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Environmental Protection

May 19, 2015

Mr. Gene Smith
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304

Re: Casing on Well (PNG102)

Dear Mr. Smith,

EQT is requesting the 13-3/8" surface casing be set at 673' KB, 150' below the deepest fresh water. We will set the 9-5/8" intermediate string at 3080' KB, 50' below the base of the Bayard formation.

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

Vicki Roark
Permitting Supervisor

4710303140

Enc.

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AUG 31 2015

WV Department of
Environmental Protection

EQT Production 115 Professional Place I P.O. Box 280 I Bridgeport, WV 26330
T 304.848.0000 I F 304.848.0040 I www.eqt.com

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
dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company
1380 Route 286 Hwy E #121
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson

James Peterson
Environmental Resources Specialist / Permitting

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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
dep.wv.gov

BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA

IN THE MATTER OF A VARIANCE FROM	)	**ORDER NO. 2014 - 17**
REGULATION 35 CSR § 4-11.4/11.5/14.1	)	
AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE	)	
THE OPERATIONAL	)	
REGULATIONS OF CEMENTING OIL	)	
AND GAS WELLS	)	

4710303140

REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

FINDINGS OF FACT

1.) Nabors Completion & Production Services Co. proposes the following cement blend:

- 2% Calcium Chloride (Accelerator)
- 0.25 % Super Flake (Lost Circulation)
- 94% Type "1" Cement
- 5.20 % Water

2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.

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CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be 8 hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after 8 hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

API 47 103 03140

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE STATE OF WEST VIRGINIA

James Martin, Chief
Office of Oil and Gas

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API No. 47 - 103 - 0
Operator's Well No. 513494

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 (HUC10) Fishing Creek Quadrangle Pine Grove

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

Will a pit be used ? Yes: X No: ___

If so please describe anticipated pit waste: flowback water & residual solids

Will a synthetic liner be used in the pit? Yes X No ___ If so, what ml.? 60

Proposed Disposal Method For Treated Pit Wastes:

___ Land Application
• Underground Injection (UIC Permit Number 0014, 8462, 4037)
• Reuse (at API Number Various)
• Off Site Disposal (Supply form WW-9 for disposal location)
___ Other (Explain ___)

47 103 03140

Will closed loop system be used ? 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.

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, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

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

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 August 1, 2005, 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 ___
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor

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Subscribed and sworn before me this 26 day of Aug, 20 15

Notary Public ___

My commission expires 8-24-22

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

4710303140

Form WW-9

Operator's Well No. 513494

Proposed Revegetation Treatment: Acres Disturbed 73.28 Prevegetation pH 6.2

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

Fertilizer Amount 1/3 lbs/acre (500 lbs minimum)

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		

4710303140

Attach:
Drawing(s) of road, location,pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments:

Title: Oil + Gas Inspector Date: 9-4-15

Field Reviewed? (✓) Yes ( ) No

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Where energy meets innovation.

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Site Specific Safety Plan

EQT PNG 102 Pad

Pine Grove

Wetzel County, WV

For Wells:

513494

Date Prepared: May 18, 2015

EQT Production

Permitting Supervisor
Title

8-26-15
Date

WV Oil and Gas Inspector

Oil + Gas Inspector
Title

9-4-15
Date

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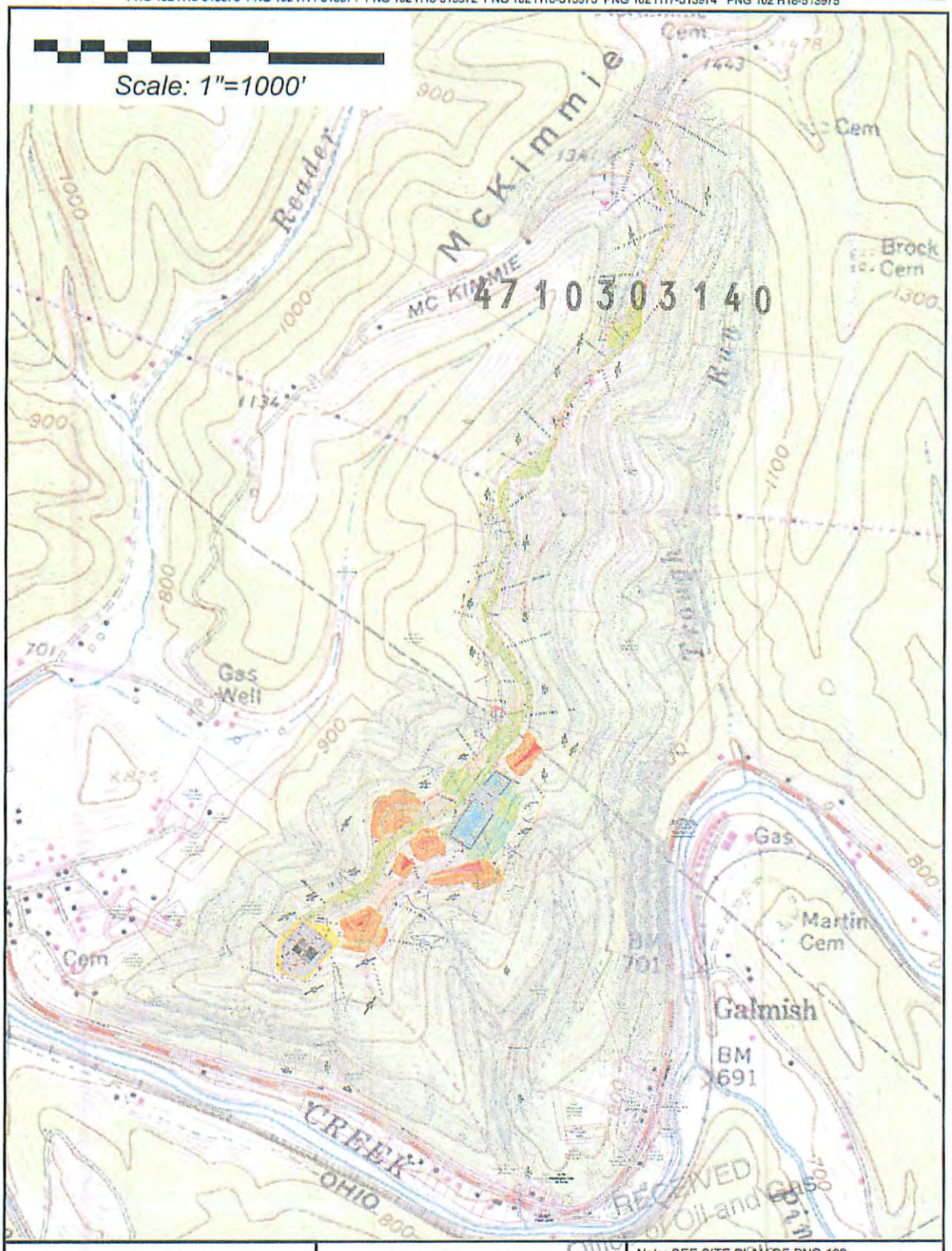
WW-9

PNG 102 H1-513492 PNG 102 H2-513493 PNG 102 H3-513494 PNG 102 H4-513495 PNG 102 H5-513496 PNG 102 H6-513497
PNG 102 H7-513964 PNG 102 H8-513965 PNG 102 H9-513966 PNG 102 H10-513967 PNG 102 H11-513968 PNG 102 H12-513969
PNG 102 H13-513970 PNG 102 H14-513971 PNG 102 H15-513972 PNG 102 H16-513973 PNG 102 H17-513974 PNG 102 H18-513975

Scale: 1"=1000'



Pullman 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)		Well Site Location	See Site Plan
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan

DRAWN BY: Dale Tomlin PS	DATE: April 24, 2015	FILE NO. 218-10	DRAWING FILE NO. 21810_PNG 102 Rec Plan

Note: SEE SITE PLAN OF PNG 102 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

RECEIVED
Office of Oil and Gas
WV Department of Environmental Protection

SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

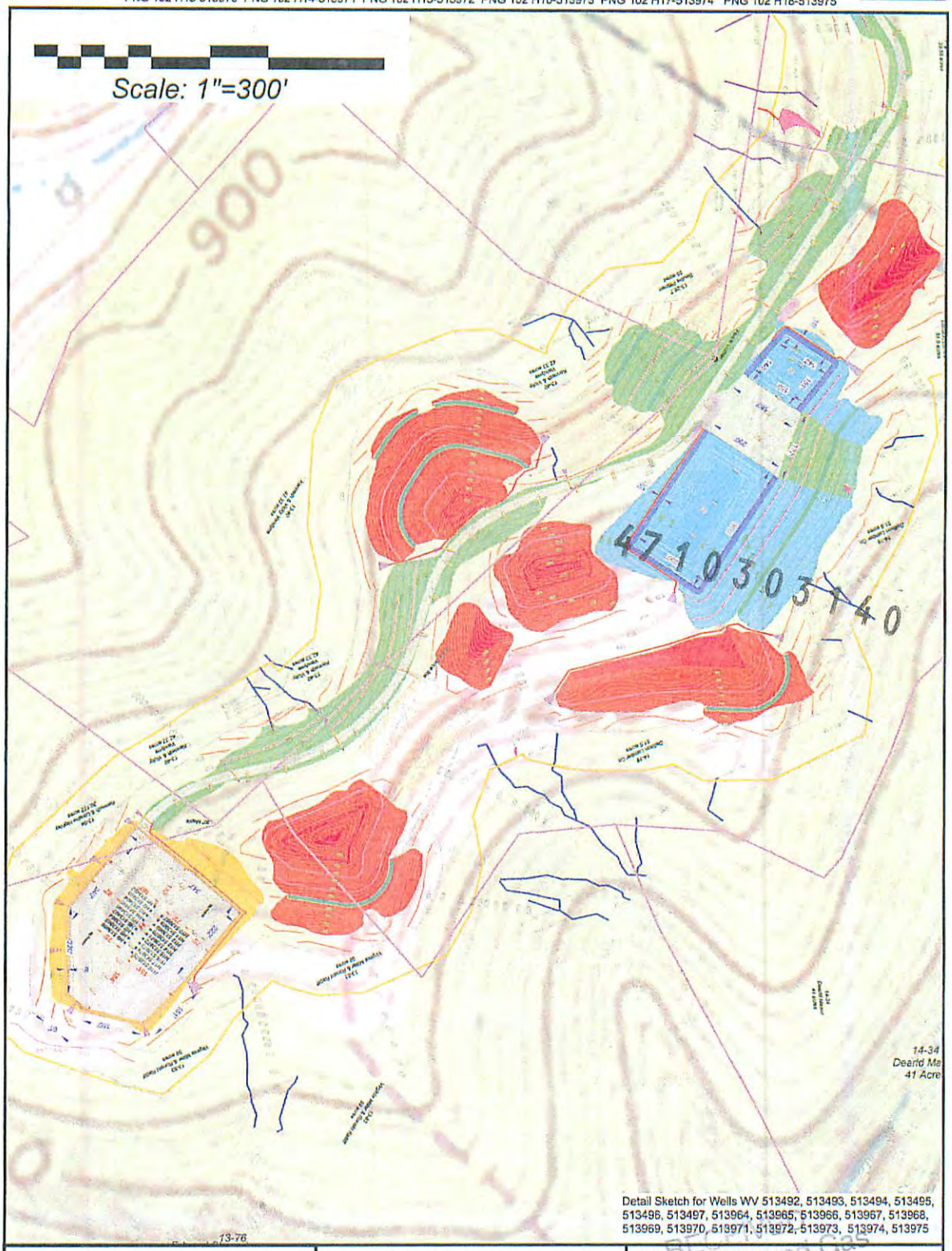
1-800-482-8606

Birch River Office
Phone: (304) 649-8606
Fax: (304) 649-8608

237 Birch River Road
P.O. Box 438
Birch River, WV 26610

WW-9

PNG 102 H1-513492 PNG 102 H2-513493 PNG 102 H3-513494 PNG 102 H4-513495 PNG 102 H5-513496 PNG 102 H6-513497
PNG 102 H7-513964 PNG 102 H8-513965 PNG 102 H9-513966 PNG 102 H10-513967 PNG 102 H11-513968 PNG 102 H12-513969
PNG 102 H13-513970 PNG 102 H14-513971 PNG 102 H15-513972 PNG 102 H16-513973 PNG 102 H17-513974 PNG 102 H18-513975



Detail Sketch for Wells WV 513492, 513493, 513494, 513495, 513496, 513497, 513964, 513965, 513966, 513967, 513968, 513969, 513970, 513971, 513972, 513973, 513974, 513975

Pullman 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)		Well Site Location	See Site Plan
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan
DRAWN BY: Dale Tomlin PS	DATE: April 24, 2015	FILE NO: 218-10	DRAWING FILE NO: 21610_PNG 102 Rec Plan

Note: SEE SITE PLAN OF PNG 102 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

Office of Oil & Gas
AUG 3 2015
WV Department of Environmental Protection

SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606

Birch River Office
Phone: (304) 649-8606
Fax: (304) 649-8608

237 Birch River Road
P.O. Box 438
Birch River, WV 26610

EQT Production Water plan
Offsite disposals for Marcellus wells

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

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

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

47 10303140

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

June 15, 2015

Mark Collins
WV Dept. of Environmental Protection
Division of Oil and Gas
601 57th St East
Charleston, WV 25304

RE: Increased estimated water for fracking

Dear Mr. Collins

EQT submitted a Water Management Plan for the PNG102 well pad on 6/4/15 based on the proposed lateral lengths of three wells. Since then we have been able to lengthen the laterals on 513493 and 513494 by approximately 2500' combined. The attached WMP reflects the increased amount of water that will be required to frac.

If you have any questions, please contact me at 304.848.0076

Sincerely,

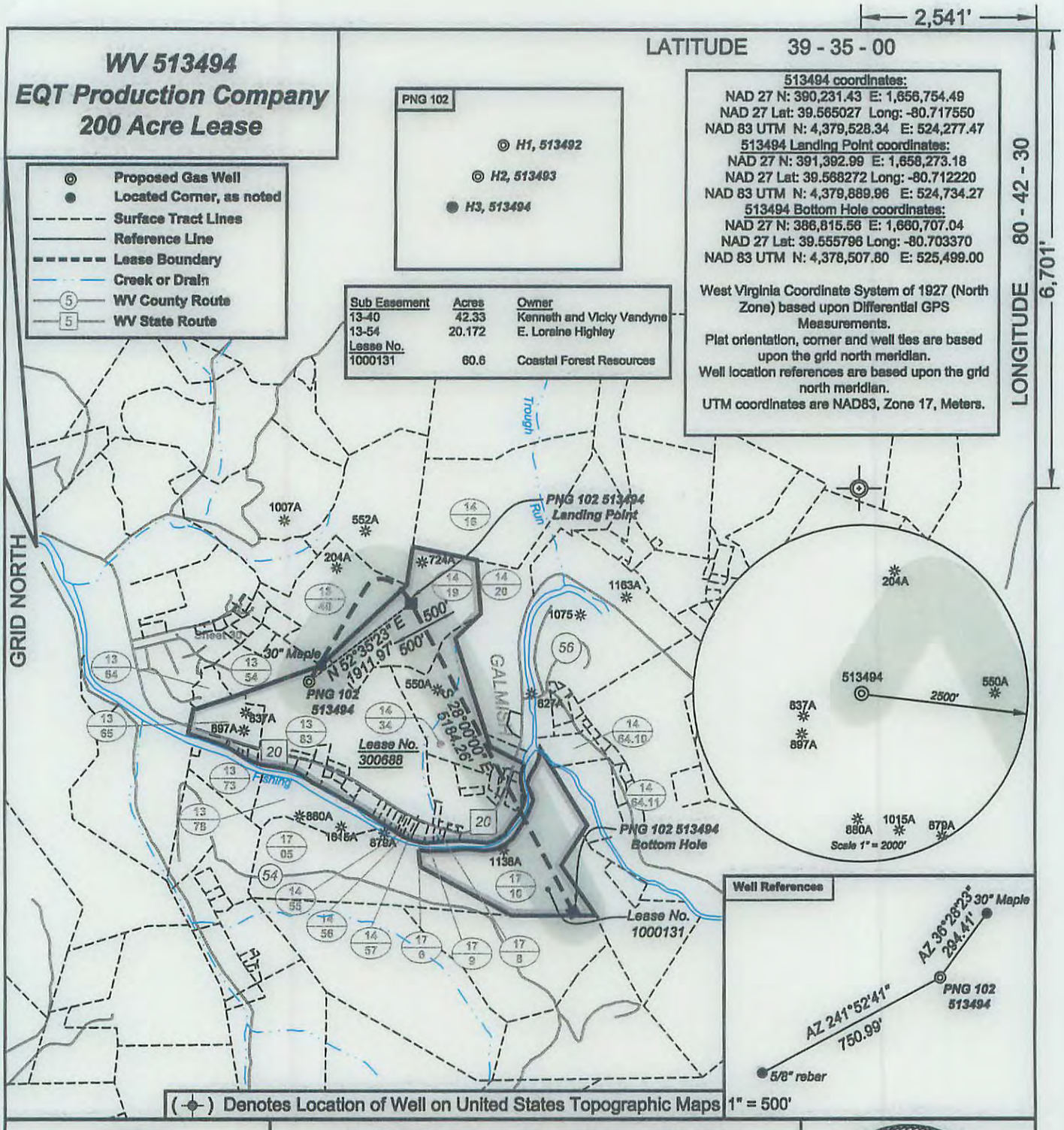
Vicki Roark
Permitting Supervisor - WV

4710303140

Enc.

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

WV 513494
EQT Production Company
200 Acre Lease



ALLEGHENY SURVEYS, INC.

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.

Dwayne A Hall
P.S. 2089 SU

DWAYNE A. HALL LICENSED No. 2089 SU STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

SEAL

FILE NO: 218-10
DRAWING NO: 218-10 PNG 102 H3
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: August 21 20 15
OPERATOR'S WELL NO. 513494
API WELL NO
47 . 103 . 03140 HGA
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION : ☐ STORAGE ☐ DEEP ☒ SHALLOW
LOCATION: ELEVATION: 1146' Proposed 1178' Original WATERSHED Fishing Creek QUADRANGLE: Pine Grove
DISTRICT: Green COUNTY: Wetzel
SURFACE OWNER: Virginia Miller Heirs ACREAGE: 59
ROYALTY OWNER: Virginia Miller Heirs LEASE NO: 300688 ACREAGE: 200
PROPOSED WORK: ☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ 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: Marcellus ESTIMATED DEPTH: TVD 6,804

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

LI-15-I/52-899

THIS LICENSE AGREEMENT (Agreement) made and entered into this 12thday of June, 2015, is between the **STATE OF WEST VIRGINIA, DEPARTMENT OF COMMERCE, DIVISION OF NATURAL RESOURCES**, (hereinafter referred to as the Division), and **EQT Production Company**, (hereinafter referred to as the Licensee).

W I T N E S S E T H:

WHEREAS, the Division is the holder of the title to the streambeds and minerals thereunder by the State of West Virginia, including the Licensed Premises, as hereinafter defined; and

WHEREAS, the Licensee desires to utilize property owned by the Division solely or in connection with other property rights it may own or lease from others for the purpose of removing the oil and/or gas resources adjacent to the streamped of Fishing Creek in Wetzel County, West Virginia.

NOW, THEREFORE, and in consideration of the sum of **ONE DOLLAR ($1.00)**, cash in hand paid, the receipt of which is hereby acknowledged, and in further consideration of the full and complete performance of the covenants and conditions herein set forth, the Division does hereby grant and extend to Licensee the license, right and permission to drill or bore, install and operate a horizontal wellbore(s) and related downhole facilities to be used for drilling, testing, completing, producing and operating a well off the Licensed Premises and to place two (2) five and one half-inch (5 1/2") casings under the streambed to access property adjacent to said streambed that is owned or leased by Licensee, at the location as shown and indicated in red on the map marked Exhibit A attached hereto and made a part hereof (the Licensed Premises).

Division also grants to Licensee the right to transport oil, gas and associated hydrocarbons through the subsurface horizontal wellbore underlying the Licensed Premises without incurring any liability to Division for any payment (including for rent or royalty), except for the License Fee described hereinafter.

It is expressly understood and agreed by and between the parties hereto that the exclusive rights and privileges granted by this Agreement shall be irrevocable during the term hereof as hereinafter set forth, so long as there is full and complete performance of the covenants and conditions herein and hereinafter set forth by the Licensee.

The parties hereto further covenant and bind themselves as follows:

1. The term of this Agreement shall be as long as the Licensee is using the wellbores under the Licensed Premises for operations and production of a well off the Licensed Premises.

2. The Licensee shall not conduct hydraulic fracturing operations under the Licensed Premises, but may transport all necessary tools and fluids to conduct hydraulic fracturing operations off the Licensed Premises.

3. The Licensee shall not access, develop or produce the oil, gas, and/or any other hydrocarbons, minerals, or substances, underlying the Licensed Premises.

4. The Licensee shall dispose of any excess drilling mud, cuttings and other waste materials at an adequately sized disposal facility located away from the water to prevent it from entering the watercourse.

5. The Licensee shall maintain effective sediment and erosion control measures until re-vegetation of disturbed areas is achieved.

6. The Licensee shall wash, refuel and service machinery and store fuel and other materials for machinery away from the water to prevent any deleterious substance from entering the watercourse.

7. The Licensee shall not allow any equipment to enter the streambed or river.

8. The Licensee shall reshape, seed, and mulch all shore areas disturbed by its operations within ninety (90) days upon completion of the drilling, boring, or installing of the well bore in or under the Licensed Premises.

9. The Licensee shall follow best management practices in all phases of its operations on, under, or within the Licensed Premises, including without limitation, using hay bales to reduce downstream siltation.

47-103-03140

10. The Licensee shall safely conduct its operations at a depth below the Licensed Premises sufficient to prevent any disturbance, damage, or endangerment to the streambed or river.

11. The Licensee shall pay the Division an annual license fee of **FIVE HUNDRED DOLLARS ($500.00) (License Fee)**, with the first payment due upon the date of execution of this Agreement, and all future payments due annually on or before the first day of twelfth month thereafter, during the term of this Agreement.

12. The Licensee shall save harmless and indemnify the Division for any and all liability for personal injuries, property damage, or for loss of life or property resulting from, or in any way connected with, the condition or use of the Licensed Premises covered by this Agreement, or any means of ingress thereto or egress therefrom except liability for personal injuries, property damage, or loss of life or property caused by the negligence of the Division or any agency, agent, servant or employee of the Division.

13. The Licensee shall not assert any claim against the Division or any agency, agent, servant or employee of the Division for damage sustained by dredging operations unless occasioned by any act or omission of the Division or any agency, agent, servant or employee of the Division.

14. This Agreement shall not be transferred, assigned or sold to any other person, corporation, partnership or other business entity without the prior written consent of the Division, which shall not be unreasonably withheld.

15. It is further covenanted and agreed to by and between the parties hereto that nothing herein contained shall be construed as authorizing an entrance on or invasion of private property by the Licensee, nor is permission granted to remove any material which lies upon the property of any other person.

16. The Licensee shall not attempt to prevent the full and free use by the public of all waters adjacent to its operations.

17. If Licensee and the Division enter into an oil and gas lease to explore and/or produce oil and gas underlying the Licensed Premises, this Agreement shall immediately cease as of the effective date of said lease and all terms set forth in this Agreement shall become null and void.

IN WITNESS WHEREOF, the **State Of West Virginia, Department Of Commerce, Division of Natural Resources, and EQT Production Company**, have hereto caused their respective names to be signed and their seals to be affixed hereto, all by proper officer thereto duly authorized, as of the day and year first hereinabove written.

ATTEST:

Its Secretary

[Seal]

STATE OF WEST VIRGINIA
DEPARTMENT OF COMMERCE
DIVISION OF NATURAL RESOURCES

By
Its Director

ATTEST:

By

Its Regional Land Manager

[Corporate Seal]

EQT PRODUCTION COMPANY

By BWBII

Its Attorney-in-Fact

47-103-03140

STATE OF WEST VIRGINIA
COUNTY OF KANAWHA, To-wit:

I, Annette J. Roberts a Notary Public of the said County and State, do hereby certify that Bob Fala, Director, who signed the writing hereto annexed, for the State of West Virginia, Department of Commerce, Division of Natural Resources, bearing date the 12th day of June, 2015, has this day in my said County, before me, acknowledged said writing to be the act and deed of said Division.

Given under my hand this 2nd day of July, 2015.

My Commission expires 12/24/22.

OFFICIAL SEAL
Notary Public, State of West Virginia
ANNETTE J ROBERTS
WV Division of Natural Resources
324 4th Avenue
South Charleston, WV 25303
My commission expires December 24, 2022

Annette J. Roberts
Notary Public

STATE OF
COUNTY OF Harrison, To-wit:

I, Katelyn L. Liston, a Notary Public of the said County and State do hereby certify that John Damato, the Attorney-In-Fact, of EQT Production company, who signed the writing hereto annexed, for EQT Production Company, bearing date the 12th day of June, 2015, has this day in my said County, before me, acknowledged said writing to be the act and deed of said Company.

Given under my hand this 22nd day of June, 2015.

My Commission expires May 16, 2024.

OFFICIAL SEAL
Notary Public, State of West Virginia
KATELYN L LISTON
1306 Serene Drive
Fairmont, WV 26554
My commission expires May 16, 2024

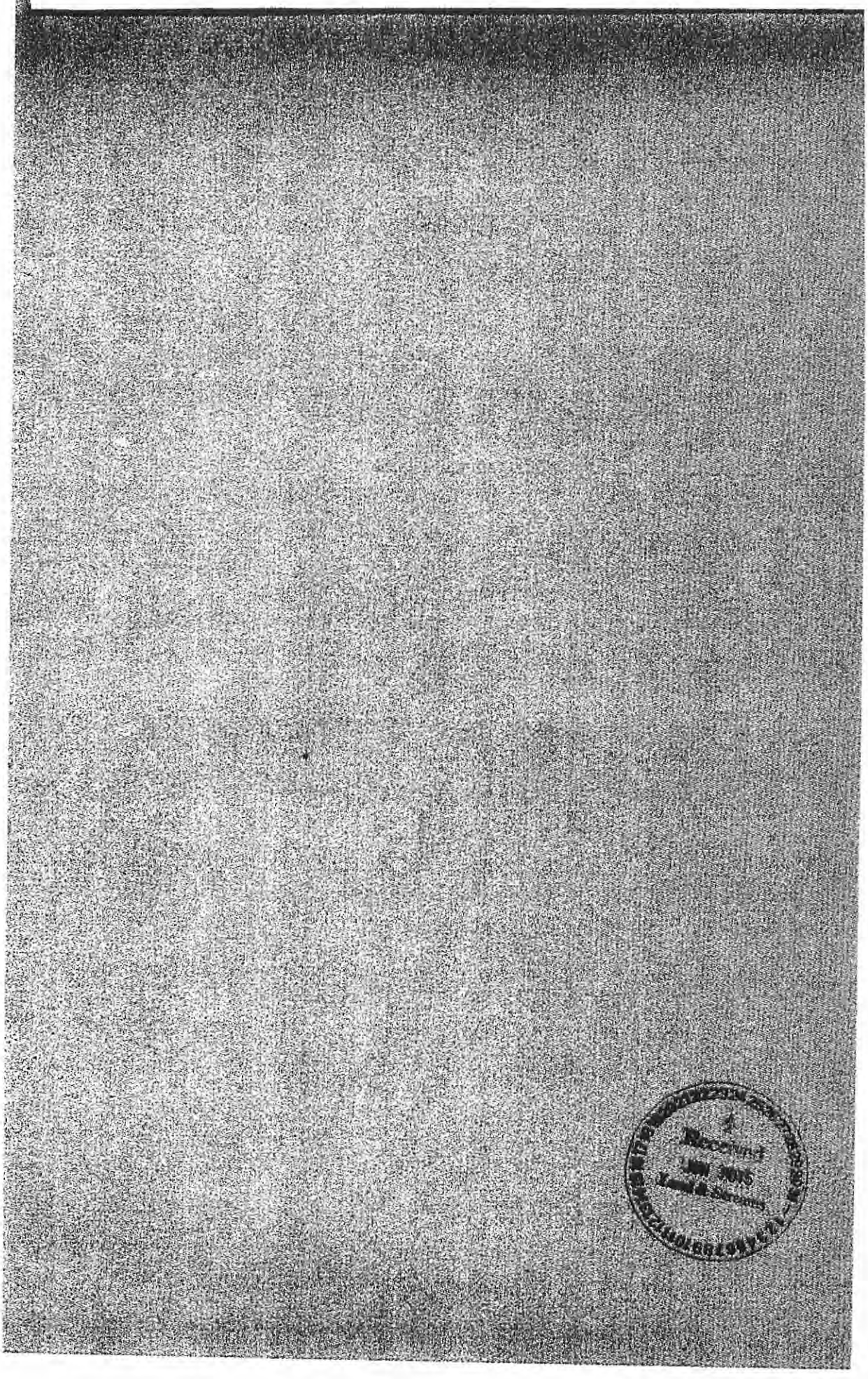
Katelyn L. Liston
Notary Public

Prepared By: Office of Land & Streams
Division of Natural Resources
Department of Commerce
South Charleston, West Virginia 25303

47-103-03140

Exhibit A

47-103-03140



EQT Production Company
2400 Zenith Ridge Rd.
Suite 200
Canonsburg, PA 15317
www.eqt.com

Todd Klaner
Manager, Permitting
tklaner@eqt.com

Via E-Mail

October 16, 2015

WV DEP Reviewer

RE: EQT Production Company
PAD ID - PNG102
Well# - 513494
Wetzel County

Dear Reviewer,

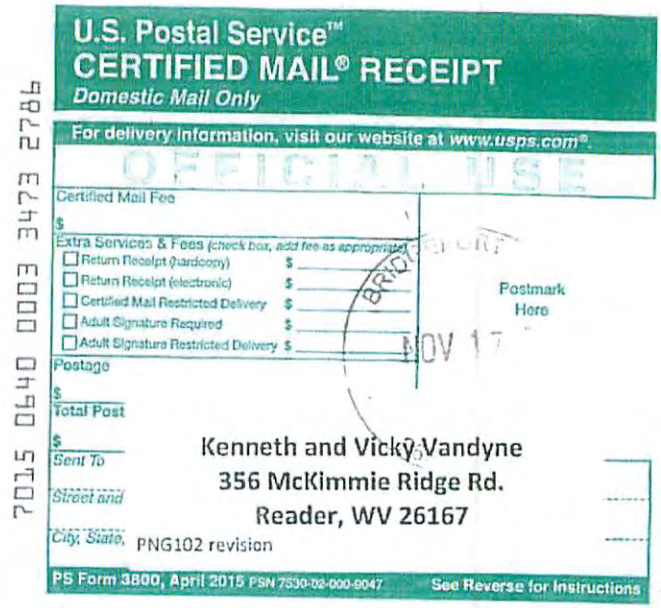
This well indicated by this permit application contains a Subsurface Easement Agreement for non-productive portions of the well bore. Attached is a Memorandum of Subsurface Use Agreement which gives EQT the right to drill below the surface of the tracts 13/40 and 13/54 shown on the well plat.

EQT Production understands that the WVDEP will issue the permit in the normal process subject to the completeness of the requirements of the Office of Oil and Gas and does not take a position with regards to the property rights under this agreement.

EQT Production agrees that the WVDEP's issuance of the permit is in no way an affirmance or validation of EQT Production's claimed rights.

Regards,

Todd Klaner
Manager, Permitting
EQT Production Company



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NOV 17

Kenneth and Vicky Vandyne
356 McKimmie Ridge Rd.
Reader, WV 26167

PNG102 revision

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 0640 0003 3473 2786

WW-6AW
(1-12)

API NO. 47 – 103 – 03140
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A
The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions
Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: Provided, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

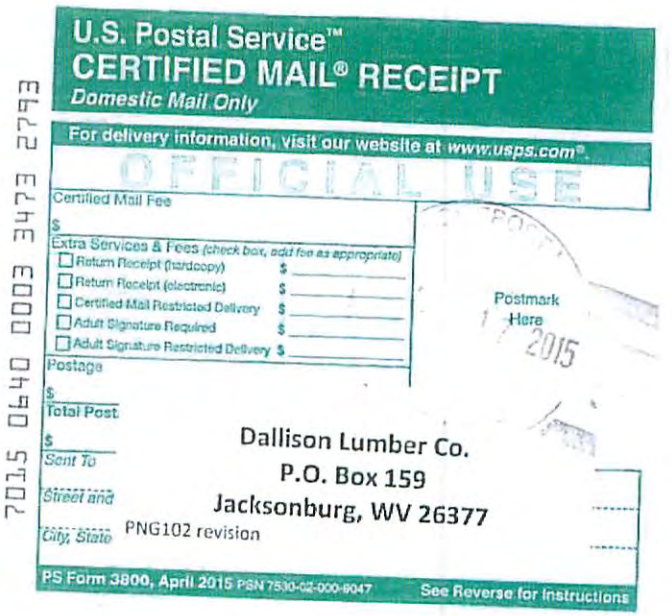
I, Kenneth Van Dyne hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	WV	UTM NAD 83 Easting:	524,277.47
County:	Wetzel	UTM NAD 83 Northing:	4,379,528.34
District:	Green	Public Road Access:	RT 250
Quadrangle:	Pine Grove	Generally used farm name:	Emma Virginia Miller Heirs
Watershed:	Fishing Creek		

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.

*Please check the box that applies	FOR EXECUTION BY A NATURAL PERSON
☐ SURFACE OWNER	Signature: Kenneth Van Dyne
☑ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: Kenneth Van Dyne
☐ SURFACE OWNER (IMPOUNDMENTS/PITS)	Date:
☐ COAL OWNER OR LESSEE	FOR EXECUTION BY A CORPORATION, ETC.
☐ COAL OPERATOR	Company:
☐ WATER PURVEYOR	By:
☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Its:
	Signature:
	Date:

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov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Adult Signature Restricted Delivery $
Postage
$
Total Post
$
Sent To
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City, State
Postmark
Here
2015
Dallison Lumber Co.
P.O. Box 159
Jacksonburg, WV 26377
PNG102 revision
PS Form 3800, April 2015 PSN 7530-02-000-9047
See Reverse for Instructions
7015 0640 0003 3473 2793

WW-6AW
(1-12)

API NO. 47 – 103 – 03140
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A
The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions
Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: Provided, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Ed Dallison hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	WV	UTM NAD 83 Easting:	524,277.47
County:	Wetzel	UTM NAD 83 Northing:	4,379,528.34
District:	Green	Public Road Access:	RT 250
Quadrangle:	Pine Grove	Generally used farm name:	Emma Virginia Miller Heirs
Watershed:	Fishing Creek		

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.

*Please check the box that applies	FOR EXECUTION BY A NATURAL PERSON
☐ SURFACE OWNER	Signature: Ed Dallison
☐ SURFACE OWNER (Road and/or Other Disturbance)	Print Name: Ed Dallison
☑ SURFACE OWNER (IMPOUNDMENTS/PITS)	Date: 11/18/15
☐ COAL OWNER OR LESSEE	FOR EXECUTION BY A CORPORATION, ETC.
☐ COAL OPERATOR	Company:
☐ WATER PURVEYOR	By:
☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD	Its:
	Signature:
	Date:

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov

WW-6A1
(5/13)

Operator's Well No. 513494

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

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; 4710303140

(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:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
300688			Min 1/8 pd	
	Jenkins Miller	Hope Natural Gas Company		LB107/56
	Hope Natural Gas Company	Consolidated Gas Supply Company		LB233/387
	Consolidated Gas Supply Company	CNG Transmission Corporation		LB66A/69
	CNG Transmission Corporation	Eastern States Oil & Gas Inc.		LB76A/270
	Eastern States Oil & Gas Inc.	Equitable Production Co.		CB13/14
	Equitable Production Co.	EQT Production Company		CB13/14
1000131			Min 1/8 pd	
	C. S. Headlee and Elizabeth Headlee	Hope Natural Gas Company		LB8A/198
	Hope Natural Gas Company	Consolidated Gas Supply Company		DB223/387
	Consolidated Gas Supply Compnay	Consolidated Gas Transmission Corp		LB66A/69
	Consolidated Gas Transmission Corp	CNG Transmission Corp		LB66A/69
	CNG Transmission Corp	Eastern States Oil & Gas Company		LB76A/232
	Eastern States Oil & Gas Company	Blazer Energy Corp		CB12/253
	Blazer Energy Corp	Eastern States Oil & Gas Company		CB12/259
	Eastern States Oil & Gas Company	Equitable Production - Eastern States Oil & Gas		CB13/14
	Equitable Production - Eastern States Oil & Gas	Equitable Production Co.		CB13/14
	Equitable Production Co.	EQT Production Company		CB13/14

Upon information and belief, Operator's lease and/or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

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

4710307140

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 affected activity is initiated.

Well Operator: EQT Production Company
By:
Its: Permitting Supervisor

EQT PRODUCTION COMPANY- ATTN: KATELYN LISTON
115 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-4509

SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT

County Clerk please also index under the following:

Anna Jane Kiger Williams, Donald L. Smith, II & Cshawn L. Smith, Harold R. Trader III, Kimberly K. Aliquo, Wilda Siburt, Martha Parsons, James T. Siburt, Paul K. Siburt, Joseph R. Moore, Jr. & Isabelle J. Moore, Celia Diane Cope, Shiben Estates, Inc.

This SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT ("Agreement") is made the 15th day of April, 2015, between Kenneth Vandyne, a/k/a Kenneth E. Vandyne and Vicky A. Vandyne, his wife, (hereinafter "Grantor" whether one or more), whose address is P.O. Box 311 Reader, WV 26167 and **EQT PRODUCTION COMPANY**, (hereinafter "EQT"), whose corporate headquarters are located at 625 Liberty Avenue, Suite 1700, Pittsburgh, PA, 15222.

1. **Property**. Grantor owns that certain tract of land located in Green District, Wetzel County, West Virginia (the "Land") containing 42.33 acres, more or less, and conveyed to Grantor in Deed Book 357, at page 204. 47-103-03140

Tax Map and Parcel # 05-13-40

2. **Subsurface**. For purposes of this Agreement, the subsurface shall be limited to the subsurface region and underground lying below the deepest economically mineable and merchantable coal seam.

3. **Grant**. In consideration of Ten Dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor grants to EQT a non-exclusive, perpetual Right-of-Way and subsurface easement within and underlying the Land for the purpose of locating and maintaining one or more wellbores for the production of hydrocarbons by EQT from EQT's adjacent mineral tracts and leases. This Right-of-Way and easement shall run with the land and shall remain in force and effect until released and relinquished by EQT back to the Grantor, in writing.

4. **Wellbores**. Upon completion of any wellbore within the subsurface underlying the Land (the "Subsurface Land"), the subsurface easement in the area of the wellbore and the one hundred (100') feet on each side of the wellbore that parallels it shall become an *exclusive* Right-of-Way and easement in that area. The wellbore locations are generally described in the plat(s) filed with the West Virginia Department of Environmental Protection (the "DEP") for well(s): 513492, 513493 and 513494. If an as-built plat is not available from the DEP for a wellbore located within the Subsurface Land, any third-party with the right to operate within the Subsurface Land may contact EQT's land department for a copy of such as-built plat. After the date of this Agreement, EQT shall provide notice of additional wellbores located within the remaining Subsurface Land by filing an amendment, affidavit or other appropriate document.

5. **No Surface Operations**. This Agreement does not grant EQT the right to conduct any operations on the surface of the Land. No surface operations shall be conducted on the Land by EQT unless the parties enter into a separate agreement.

6. **Miscellaneous Provisions**.
   (a) This instrument may be executed in one or more counterparts, each of which will be deemed to be an original copy of this instrument and all of which will be deemed to comprise one single instrument.
   (b) The parties consent to the exclusive jurisdiction of either the United States District Court for the Western District of Pennsylvania or the Court of Common Pleas of Allegheny County, Pennsylvania, for any disputes or issues arising under, or in any way related to, this Agreement.
   (c) The parties agree that this Agreement shall be filed of record together with all exhibits thereto.

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WV Department of
Environmental Protection

(d) For no additional consideration, Grantor shall execute such further documents as may be reasonably requested by EQT from time to time to effectuate the intent of this Agreement.

IN WITNESS WHEREOF, effective as of the date first above written. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors, assigns, heirs and administers and executors.

Kenneth E. Vandyne

Vicky A. Vandyne

EQT PRODUCTION COMPANY

By:

Name: John W. Damato

Title: Attorney-in-Fact

Carol S Haught
WETZEL County 10:51:54 AM
Instrument No 191834
Date Recorded 05/27/2015
Document Type R/W
Pages Recorded 3
Book-Page 113-569
Recording Fee $5.00
Transfer Tax $132.00
Additional $26.00

STATE OF WEST VIRGINIA ;

COUNTY OF: Wetzel :

Before me, Justin R. Nixon, a Notary Public, on this day personally appeared Kenneth Vandyne, a/k/a Kenneth E. Vandyne and Vicky A. Vandyne, known to me and acknowledged to me that he executed the instrument for the purposes and consideration therein expressed as his free act and deed. 4710303140

Given under my hand and seal of office this 16th day of April, 2015.

My Commission expires: Oct. 5, 2019.

OFFICIAL SEAL
JUSTIN ROBERT NIXON
Commissioner for West Virginia
My Comm. Expires Oct 5, 2019
8292 Plainwood Ave Stonewood WV 26301

Notary Public

STATE OF WEST VIRGINIA;

COUNTY OF HARRISON:

Before me, Katelyn L. Liston, a Notary Public, on this day personally appeared, John W. Damato known to me to be the Attorney-in-Fact of **EQT PRODUCTION COMPANY**, subscribed to the foregoing instrument, and acknowledged to me that he executed the instrument for the purposes and consideration therein expressed as his free act and deed.

Given under my hand and seal of office this 16th day of April, 2015.

My Commission expires: May 16, 2024.

OFFICIAL SEAL
Notary Public, State of West Virginia
KATELYN L LISTON
1308 Serene Drive
Fairmont, WV 26554
My commission expires May 16, 2024

Notary Public

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AUG 31 2015

Prepared by: EQT Production Company, 625 Liberty Avenue, Suite 1700, Pittsburgh, PA 15222

WV Department of
Environmental Protection

Declaration of Consideration of Value

The Grantee hereby declares that the consideration being paid to Grantor for the transfer of real estate is $[redacted]

Given under my hand this 26th day of May, 2015.

BWB

EQT PRODUCTION COMPANY
John W. Damato
Attorney-In-Fact

4710303140

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Environmental Protection

EQT PRODUCTION COMPANY- ATTN: KATELYN LISTON
115 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-4509

SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT

County Clerk please also index under the following:

Anna Jane Kiger Williams, Donald L. Smith, II & Cshawn L. Smith, Harold R. Trader III, Kimberly K. Aliquo, Wilda Sibart, Martha Parsons, James T. Sibart, Paul K. Sibart, Joseph R. Moore, Jr. & Isabelle J. Moore, Celia Diane Cope, Shiben Estates, Inc., Phillip Joseph Peters, John Joseph Mensore, Esta Marie McCall, John J. Shiben, Timothy R. Shiben, Richard J. Shiben Family Trust, Loraine Highley

This SUBSURFACE RIGHT-OF-WAY AND EASEMENT AGREEMENT ("Agreement") is made the 23rd day of April, 2015, between **Loraine Highley, a/k/a Lorraine Highley, a/k/a Ethel Lorraine Highley**, a widow, (hereinafter "Grantor" whether one or more), whose address is P.O. Box 286 Reader, WV 26167 and **EQT PRODUCTION COMPANY**, (hereinafter "EQT"), whose corporate headquarters are located at 625 Liberty Avenue, Suite 1700, Pittsburgh, PA, 15222.

1. **Property**. Grantor owns that certain tract of land located in Green District, Wetzel County, West Virginia (the "Land") containing 20.172 acres, more or less, and conveyed to Grantor in Deed Book 230, at page 93.

Tax Map and Parcel # 05-13-54

47103031 40

2. **Subsurface.** For purposes of this Agreement, the subsurface shall be limited to the subsurface region and underground lying below the deepest economically mineable and merchantable coal seam.

3. **Grant.** In consideration of Ten Dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor grants to EQT a non-exclusive, perpetual Right-of-Way and subsurface easement within and underlying the Land for the purpose of locating and maintaining one or more wellbores for the production of hydrocarbons by EQT from EQT's adjacent mineral tracts and leases. This Right-of-Way and easement shall run with the land and shall remain in force and effect until released and relinquished by EQT back to the Grantor, in writing.

4. **Wellbores.** Upon completion of any wellbore within the subsurface underlying the Land (the "Subsurface Land"), the subsurface easement in the area of the wellbore and the one hundred (100') feet on each side of the wellbore that parallels it shall become an *exclusive* Right-of-Way and easement in that area. The wellbore locations are generally described in the plat(s) filed with the West Virginia Department of Environmental Protection (the "DEP") for well(s): 513492, 513493 and 513494. If an as-built plat is not available from the DEP for a wellbore located within the Subsurface Land, any third-party with the right to operate within the Subsurface Land may contact EQT's land department for a copy of such as-built plat. After the date of this Agreement, EQT shall provide notice of additional wellbores located within the remaining Subsurface Land by filing an amendment, affidavit or other appropriate document.

5. **No Surface Operations**. This Agreement does not grant EQT the right to conduct any operations on the surface of the Land. No surface operations shall be conducted on the Land by EQT unless the parties enter into a separate agreement.

6. **Miscellaneous Provisions.**

(a) This instrument may be executed in one or more counterparts, each of which will be deemed to be an original copy of this instrument and all of which will be deemed to comprise one single instrument.

(b) The parties consent to the exclusive jurisdiction of either the United States District Court for the Western District of Pennsylvania or the Court of Common Pleas of Allegheny County, Pennsylvania, for any disputes or issues arising under, or in any way related to, this Agreement.

(c) The parties agree that this Agreement shall be filed of record together with all exhibits thereto.

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(d) For no additional consideration, Grantor shall execute such further documents as may be reasonably requested by EQT from time to time to effectuate the intent of this Agreement.

IN WITNESS WHEREOF, effective as of the date first above written. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors, assigns, heirs and administers and executors.

Loraine Highley

Loraine Highley

EQT PRODUCTION COMPANY

By:

Name: John W. Damato

Title: Attorney-in-Fact

Carol S Hauert
WETZEL County 10:57:25 AM
Instrument No 181635
Date Recorded 05/27/2015
Document Type RAT
Pages Recorded 3
Book-Page 113-572
Recording Fee $5.00
Transfer Tax $11.00
Additional $20.00

STATE OF WEST VIRGINIA ;

COUNTY OF: Wetzel :

4710303140

Before me, Justin R. Nixon, a Notary Public, on this day personally appeared **Loraine Highley, a/k/a Lorraine Highley, a/k/a Ethel Lorraine Highley, a widow,** known to me and acknowledged to me that he executed the instrument for the purposes and consideration therein expressed as his free act and deed.

Given under my hand and seal of office this 23rd day of April, 2015.

My Commission expires: Oct. 5, 2019.

OFFICIAL SEAL
JUSTIN ROBERT NIXON
Commissioner for West Virginia
My Comm. Expires Oct 5, 2019
8292 Flairwood Ave Stonewood WV 26301

Notary Public

STATE OF WEST VIRGINIA;

COUNTY OF HARRISON:

Before me, Katelyn L. Liston, a Notary Public, on this day personally appeared, John W. Damato known to me to be the Attorney-in-Fact of **EQT PRODUCTION COMPANY,** subscribed to the foregoing instrument, and acknowledged to me that he executed the instrument for the purposes and consideration therein expressed as his free act and deed.

Given under my hand and seal of office this 23rd day of April, 2015.

My Commission expires: May 16, 2024.

OFFICIAL SEAL
Notary Public, State of West Virginia
KATELYN L LISTON
1300 Serene Drive
Fairmont, WV 26554
My commission expires May 16, 2024

Notary Public

Prepared by: EQT Production Company, 625 Liberty Avenue, Suite 1700, Pittsburgh, PA 15222

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Declaration of Consideration of Value

The Grantee hereby declares that the consideration being paid to Grantor for the transfer of real estate is $[redacted].

Given under my hand this 26th day of May, 2015.

BWB

EQT PRODUCTION COMPANY
John W. Damato
Attorney-In-Fact

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WW-6AC
(1/12)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 8-26-15

API No. 47 - 103 - 0
Operator's Well No. 513494
Well Pad Name: PNG102

4710303140

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	WV	UTM NAD 83 Easting:	524,277.47
County:	Wetzel	UTM NAD 83 Northing:	4,379,528.34
District:	Green	Public Road Access:	RT 250
Quadrangle:	Pine Grove	Generally used farm name:	Emma Virginia Miller Heirs
Watershed:	Fishing Creek		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY	OOG OFFICE USE ONLY
☐ NOTICE OF SEISMIC ACTIVITY or ☑ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/NOT REQUIRED
☑ NOTICE OF ENTRY FOR PLAT SURVEY or ☐ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☐ NOTICE OF INTENT TO DRILL or ☑ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED OR ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☐ RECEIVED/NOT REQUIRED
☑ NOTICE OF PLANNED OPERATION	☐ RECEIVED
☑ PUBLIC NOTICE	☐ RECEIVED
☑ NOTICE OF APPLICATION	☐ RECEIVED

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Office of Oil & Gas
AUG 31 2015
WV Department of
Environmental Protection

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I Victoria J. Roark, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification 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	Address:	P.O. Box 280
By:	Victoria J. Roark		Bridgeport, WV 26330
Its:	Permitting Supervisor	Facsimile:	304-848-0040
Telephone:	304-848-0076	Email:	vroark@eqt.com

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

Subscribed and sworn before me this 26 day of Aug ,2015

Pamela Sykes Notary Public

My Commission Expires 8-24-22

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-6A
(9-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
Date of Notice: 8-26-15 Date Permit Application Filed: 8-26-15

Notice of:

☑ PERMIT FOR ANY WELL WORK ☐ CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

4710303140

☐ PERSONAL SERVICE ☐ REGISTERED MAIL ☑ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)
Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373

Name:
Address:

☑ SURFACE OWNERS(s) (Road and/or Other Disturbance)
Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373
Name: See Attached
Address:

☑ SURFACE OWNER(s) (Impoundments/Pits)
Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373
See Attached

☑ COAL OWNER OR LESSEE
Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373

☐ COAL OPERATOR
Name:
Address:

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Loma C Lloyd
Address: HC 60 Box 191 B
Reader WV 26167
See Attached

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name:
Address:

*Please attach additional forms if necessary

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AUG 31 2015
WV Department of
Environmental Protection

WW6-A

Surface Owners(road or other disturbance):

Loraine Highley
PO Box 286
Reader WV 26167

Kenneth and Vicky Vandyne
356 McKimmie Ridge Rd.
Reader WV 26167

Dallison Lumber Co.
PO Box 159
Jacksonburg WV 26377

Beulah E. Pittman
PO Box 399
Reader WV 26167

Virginia D. Tracy
PO Box 344
Reader WV 26167

Donald L. and Myrna R. Mason
134 Brush Run Rd.
Reader WV 26167

Lauran Ann and Clayton Slater
1402 McKimmie Ridge Rd.
Reader WV 26167

Surface Owners(Pits or impoundments):

Dallison Lumber Co.
PO Box 159
Jacksonburg WV 26377

Additional Water Purveyors

Roma J Adams
PO Box 373
Reader WV 26167

Ronald M & Pamela Ann Jackson
PO Box 107
Reader WV 26167

47103031 40

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Additional Water Purveyors

Debra Ann Hengee et al
L/E Helen Brown
PO Box 341
Reader WV 26167

Theodore L Sawyer Jr
10712 Shortline Hwy
Reader WV 26167

Edward G Stewart
PO Box 403
Reader WV 26167

Michelle M Thomas
101 Apple St
Reader WV 26167

Nathaniel L & Lisa D Yoho
10736 Shortline Hwy
Reader WV 26167

47103031 40

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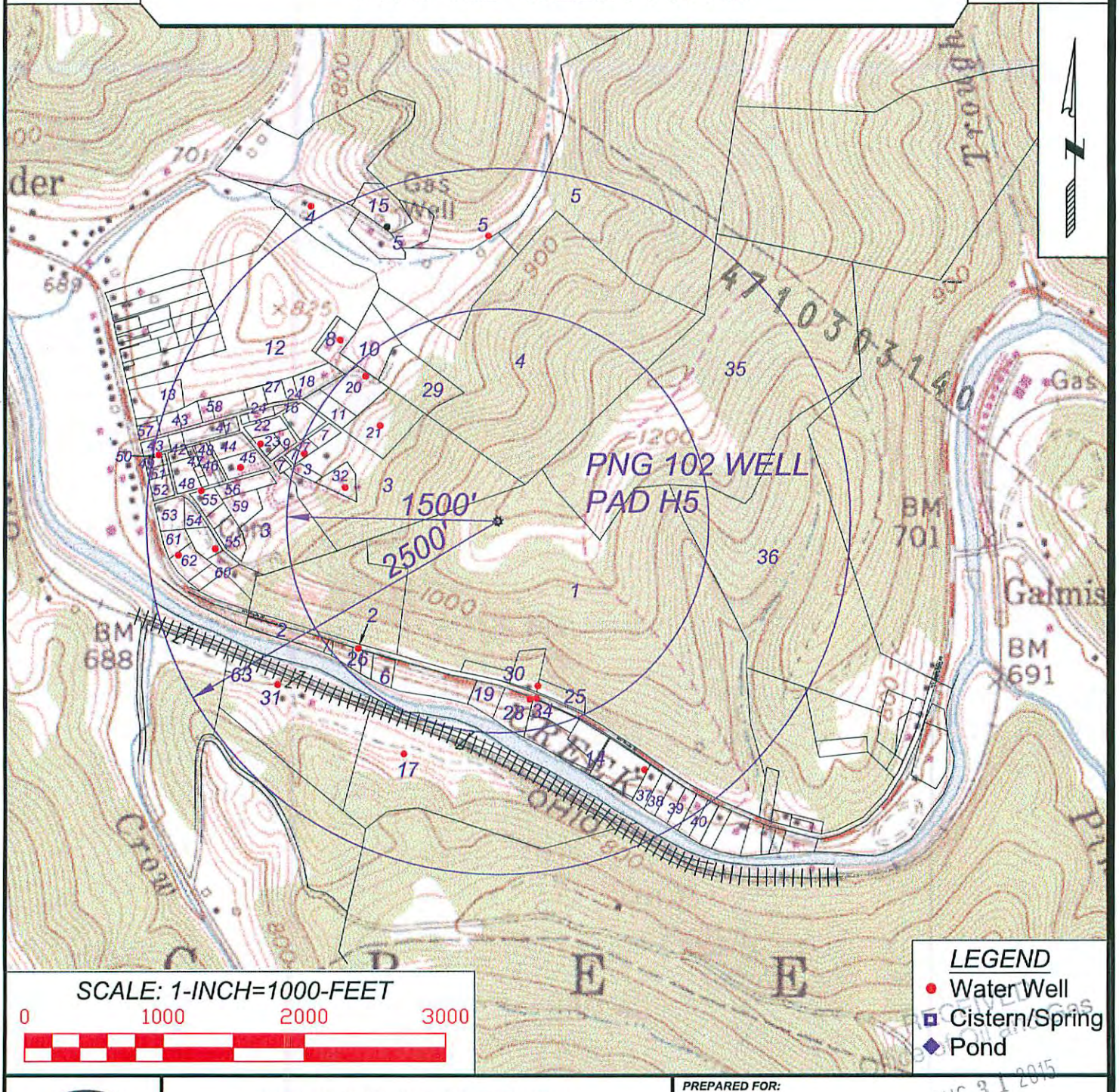
AUG 31 2015
WV Department of
Environmental Protection

Topo Quad:	Pine Grove 7.5'	Scale:	1 " = 1000'
County:	Wetzel	Date:	March 24, 2015
District:	Green	Project No:	218-34-G-10

Water

PNG 102 WELL PAD H5

Topo



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

PREPARED FOR:

EQT Production Co. Inc.

115 Professional Place, PO Box 280
Bridgeport, WV 26330

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WV Department of Environmental Protection

WW-6A
(8-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:
Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

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Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

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

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.
NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

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(8-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 513494
Well Pad Name: PNG102

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) 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.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article

Comment Requirements

Your comments must be in writing and 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.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

(1) The proposed well work will constitute a hazard to the safety of persons;
(2) The plan for soil erosion and sediment control is not adequate or effective;
(3) Damage would occur to publicly owned lands or resources; or
(4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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Notice is hereby given by:

Well Operator:	EQT Production Company	Address:	115 Professional Place P.O. Box 280
Telephone:	304-848-0082		Bridgeport, WV 26330
Email:	Vroark@eqt.com	Facsimile:	304-848-0041

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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.

By: Victoria Roark

Its: Permitting Supervisor

Subscribed and sworn before n 26 day of Aug , 2015

Notary Public

My Commission Expii 8-24-22

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EQT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

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(1/12)

Operator Well No. PNG102

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry.

Date of Notice: 2/12/2014 **Date of Planned Entry:** 2/20/2014

Delivery method pursuant to West Virginia Code § 22-6A-10(a):

[ ] PERSONAL SERVICE [x] CERTIFIED MAIL [ ] METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

[x] **SURFACE OWNER(S)**
Ronald Ratliff
Name: Heirs of Emma Virginia Miller
6619 Lynngate Drive
Address: Spring, TX 77373-7334

[x] **COAL OWNER OR LESSEE**
Coal Declaration Pursuant to §22-6A-10 and §22-6-36
Name: Not of Record 47 105 0114F
Address:

[ ] **MINERAL OWNER(S)**
Name:
Address:

Name:
Address:

*Please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: West Virginia
County: Wetzel
District: Green / Map 13 / Parcel 83
Quadrangle: Pine Grove

Approx. Latitude & Longitude: -39.564870 / -80.717717
Public Road Access: CR20
Watershed: Fishing Creek
Generally Used Farm Name: Jenkins Miller

Copies of the state Erosion and Sediment Control Manual and the statues and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: EQT Production Company
Telephone: 304-848-0075
Facsimile: 304-848-0040
Email: EQTLandEntryNotice@eqt.com

Address: 115 Professional Place, Bridgeport, WV 26330
EQT Representative: Chris Metzgar
Signature: Chris Metzgar

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such a name, address and telephone number, as part of 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@WV.gov.

Please call me when it is convienient for you
304 844 2238 Thanks!

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AUG 31 2015
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Environmental Protection

WW-6A4
(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 8/18/2015 **Date Permit Application Filed:** 8/28/2015

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED

4710303140

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373

Name: Loraine Highley
Address: PO Box 286
Reader WV 26167

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	WV	UTM NAD 83	Easting	524,277.47
County:	Wetzel		Northing	4,379,528.34
District:	Green		Public Road Access:	RT 250
Quadrangle:	Pine Grove		Generally used farm name:	Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx

Notice is hereby given by:

Well Operator:	EQT Production Company	Authorized Representative:	Victoria Roark
Address:	115 Professional Place, P.O Box 280	Address:	115 Professional Place, P.O Box 280
	Bridgeport, WV 26330		Bridgeport, WV 26330
Telephone:	304-848-0076	Telephone:	304-848-0076
Email:	vroark@eqt.com	Email:	vroark@eqt.com
Facsimile:	304-848-0041	Facsimile:	304-848-0041

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 8/18/2015 **Date Permit Application Filed:** 8/28/2015

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED

4710303140

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Kenneth & Vicky Vandyne
Address: 356 McKimmie Ridge Rd
Reader WV 26167

Name: Dallison Lumber Co
Address: PO Box 159
Jacksonburg WV 26377

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	WV	UTM NAD 83	Easting	524,277.47
County:	Wetzel		Northing	4,379,528.34
District:	Green		Public Road Access:	RT 250
Quadrangle:	Pine Grove		Generally used farm name:	Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx

Notice is hereby given by:

Well Operator:	EQT Production Company	Authorized Representative:	Victoria Roark
Address:	115 Professional Place, P.O Box 280 Bridgeport, WV 26330	Address:	115 Professional Place, P.O Box 280 Bridgeport, WV 26330
Telephone:	304-848-0076	Telephone:	304-848-0076
Email:	vroark@eqt.com	Email:	vroark@eqt.com
Facsimile:	304-848-0041	Facsimile:	304-848-0041

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Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 8/18/2015 **Date Permit Application Filed:** 8/28/2015

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

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☐ HAND DELIVERY ☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Beulah E Pittman
Address: PO Box 339
Reader WV 26167

Name: Virginia D Tracy
Address: PO Box 344
Reader WV 26167

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: WV
County: Wetzel
District: Green
Quadrangle: Pine Grove
Watershed: Fishing Creek

UTM NAD 83 Easting: 524,277.47
Northing: 4,379,528.34
Public Road Access: RT 250
Generally used farm name: Emma Virginia Miller Heirs

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 8/18/2015 **Date Permit Application Filed:** 8/28/2015

4710303140

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: Provided, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: Provided, however, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Donald & Myrna R Mason
Address: 134 Bursh Run
Reader WV 26167

Name: Lauran Ann Clayton Slater
Address: 1402 McKimmie Ridge Rd
Reader WV 26167

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: WV
County: Wetzel
District: Green
Quadrangle: Pine Grove
Watershed: Fishing Creek

UTM NAD 83 Easting: 524,277.47
Northing: 4,379,528.34
Public Road Access: RT 250
Generally used farm name: Emma Virginia Miller Heirs

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

Notice is hereby given by:

Well Operator: EQT Production Company
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place, P.O Box 280
Bridgeport, WV 26330
Telephone: 304-848-0076
Email: vroark@eqt.com
Facsimile: 304-848-0041

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone 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 or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A5
(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
Date of Notice: 8-26-15 **Date Permit Application Filed:** 8-26-15

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

4710303140

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Emma Virginia Miller Heirs
Address: c/o Ronald Wayne Ratliff
6619 Lynngate Drive
Spring TX 77373

Name: Loraine Highley
Address: PO Box 286
Reader WV 26167

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	WV	UTM NAD 83	Easting:	524,277.470000
County:	Wetzel		Northing:	4,379,528.340000
District:	Green	Public Road Access:		RT 250
Quadrangle:	Pine Grove	Generally used farm name:		Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: vroark@eqt.com
Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

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WW-6A5
(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

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Date of Notice: 8-26-15 **Date Permit Application Filed:** 8-26-15

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

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47 103 03140

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Kenneth and Vicky Vandyne
Address: 356 McKimmie Ridge Rd
Reader WV 26167

Name: Dallison Lumber Co
Address: PO Box 159
Jacksonburg WV 26377

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	WV	UTM NAD 83	Easting:	524,277.470000
County:	Wetzel		Northing:	4,379,528.340000
District:	Green	Public Road Access:		RT 250
Quadrangle:	Pine Grove	Generally used farm name:		Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of Environmental Protection

Well Operator:	EQT Production Company	Address:	115 Professional Place, P.O. Box 280
Telephone:	304-848-0082		Bridgeport, WV 26330
Email:	vroark@eqt.com	Facsimile:	304-848-0040

Oil and Gas Privacy Notice:
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WW-6A5
(1/12)

Operator Well No. 513494

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
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4710303140

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Beulah E. Pittman
Address: PO Box 339
Reader WV 26167

Name: Virginia D. Tracy
Address: PO Box 344
Reader WV 26167

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State:	WV	UTM NAD 83	Easting:	524,277.470000
County:	Wetzel		Northing:	4,379,528.340000
District:	Green	Public Road Access:		RT 250
Quadrangle:	Pine Grove	Generally used farm name:		Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

This Notice Shall Include:
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Well Operator: EQT Production Company
Telephone: 304-848-0082
Email: vroark@eqt.com

Address: 115 Professional Place, P.O. Box 280
Bridgeport, WV 26330
Facsimile: 304-848-0040

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Office of Oil and Gas
AUG 31 2015
WV Department of Environmental Protection

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WW-6A5
(1/12)

Operator Well No. 513494

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DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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4711703140

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Donald L. And Myrna R. Mason
Address: 134 Brush Run Rd.
Reader WV 26167

Name: Lauran Ann and Clayton Slater
Address: 1402 McKimmie Ridge Rd.
Reader WV 26167

Notice is hereby given:
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County:	Wetzel		Northing:	4,379,528.340000
District:	Green	Public Road Access:		RT 250
Quadrangle:	Pine Grove	Generally used farm name:		Emma Virginia Miller Heirs
Watershed:	Fishing Creek			

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Well Operator:	EQT Production Company	Address:	115 Professional Place, P.O. Box 280
Telephone:	304-848-0082		Bridgeport, WV 26330
Email:	vroark@eqt.com	Facsimile:	304-848-0040

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WV Department of

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

May 15, 2015

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

4710303140

Subject: DOH Permit for the PNG102 Pad Site, Wetzel County

513492 PNG102H1	513493 PNG102H2	513494 PNG102H3	513495 PNG102H4
513496 PNG102H5	513497 PNG102H6	513964 PNG102H7	513965 BIG190H8
513966 PNG102H9	513967 PNG102H10	513968 PNG102H11	513969 BIG190H12
513970 PNG102H13	513971 PNG102H14	513972 PNG102H15	513973 BIG190H16
513974 PNG102H17	513975 PNG102H18		

Dear Mr. Martin,

This well site will be accessed from existing Permit # 06-2015-0176 issued to EQT Production Company for access to the State Road for a well site located off of Wetzel County Route 52 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Nick Bumgardner
EQT Production Company
CH, OM, D-6, File

RECEIVED
Office of Oil and Gas
AUG 31 2015
WV Department of
Environmental Protection

4710303140

Anticipated Frac Additives

Chemical Names and CAS numbers

Material	Ingredient	CAS Number
Water		
Sand	Hydrotreated light petroleum distillate	14808-60-7
Friction Reducer	Tributyl tetradecyl phosphonium chloride	64742-47-8
Biocide	Ammonium chloride	81741-28-8
Scale Inhibitor	Hydrochloric Acid	12125-02-9
15% Hydrochloric Acid	Propargyl Alcohol	7647-01-0
Corrosion Inhibitor	Methanol	107-19-7
Corrosion Inhibitor	Guar Gum	67-56-1
Gelling Agent	Sodium Persulfate	9000-30-0
Oxidizing Breaker	Potassium Carbonate	7775-27-1
Buffering Agent		584-08-7

DMH
9-4-15

RECEIVED
Office of Oil and Gas
SEP 18 2015
WV Department of
Environmental Protection

PNG 102 WELL PAD

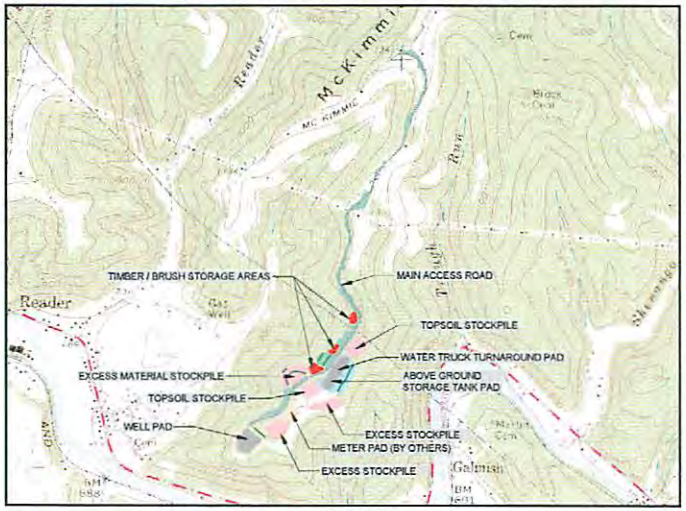
FINAL SITE DESIGN , CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS

EQT PRODUCTION COMPANY

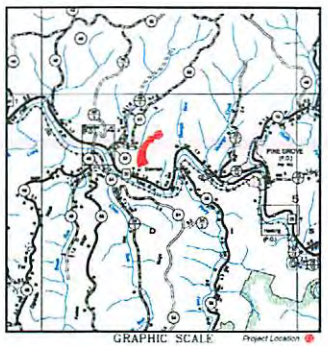
FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTON ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
HEC-RAS STUDY COMPLETED:	N/A
FLOODPLAIN SHOWN ON DRAWINGS:	N/A
FIRM MAP NUMBER(S) FOR SITE:	54103C0180C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N/A

PROPOSED WELL LEGEND

H1	513492	LAT: 39.565172	LONG:-80.717305
H2	513493	LAT: 39.565140	LONG:-80.717338
H3	513494	LAT: 39.565107	LONG:-80.717371
H4	513495	LAT: 39.565075	LONG:-80.717404
H5	513496	LAT: 39.565043	LONG:-80.717438
H6	513497	LAT: 39.565011	LONG:-80.717471
H7	513964	LAT: 39.564979	LONG:-80.717504
H8	513965	LAT: 39.564947	LONG:-80.717537
H9	513966	LAT: 39.564914	LONG:-80.717571
H10	513967	LAT: 39.565104	LONG:-80.717238
H11	513968	LAT: 39.565072	LONG:-80.717272
H12	513969	LAT: 39.565040	LONG:-80.717305
H13	513970	LAT: 39.565008	LONG:-80.717338
H14	513971	LAT: 39.564976	LONG:-80.717371
H15	513972	LAT: 39.564943	LONG:-80.717405
H16	513973	LAT: 39.564911	LONG:-80.717438
H17	513974	LAT: 39.564879	LONG:-80.717471
H18	513975	LAT: 39.564847	LONG:-80.717504



SITE LOCATIONS NAD 83	LATITUDE	LONGITUDE
Beginning of Main Access Road	39.563771	-80.716487
Center of AST 1	39.563940	-80.711512
Center of AST 2	39.563811	-80.712178
Center of AST 3	39.563845	-80.712564
Center of Well Pad	39.565037	-80.717413



West Virginia Coordinate System of 1983
State Plane Grid North
Elevations NAVD88
Established By Survey Grade GPS

AFFECTED PROPERTIES
GREEN DISTRICT - WETZEL COUNTY, WV

TM 14 - PCL 1
KENNETH & VICKY VANDYNE
73 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 7.78 ACRES
TOTAL DISTURBANCE = 7.78 ACRES
TIMBER REMOVAL = 2.38 ACRES

TM 14 - PCL 15
DONALD & MYRNA MASON
117 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 6.04 ACRES
TOTAL DISTURBANCE = 6.04 ACRES
TIMBER REMOVAL = 0.92 ACRES

TM 13 - PCL 17
LAURA ANN SLATER
90 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 2.41 ACRES
TOTAL DISTURBANCE = 2.41 ACRES
TIMBER REMOVAL = 2.41 ACRES

TM 13 - PCL 26.7
BEULAH PITTMAN
55 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 3.69 ACRES
TIMBER & BRUSH STORAGE = 0.34
TOTAL DISTURBANCE = 4.03 ACRES
TIMBER REMOVAL = 3.61 ACRES

TM 14 - PCL 16
VIRGINIA TRACY
29.56 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 3.29 ACRES
TIMBER & BRUSH STORAGE = 0.68 ACRES
TOTAL DISTURBANCE = 3.97 ACRES
TIMBER REMOVAL = 3.87 ACRES

TM 14 - PCL 19
DALLISON LUMBER CO.
51.5 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 5.38 ACRES
AST PAD / WTTA = 8.38 ACRES
TOP SOIL STOCKPILES = 5.78 ACRES
EXCESS MATERIAL STOCKPILES = 6.26 ACRES
METER SITE = 1.39 ACRES
TIMBER & BRUSH STORAGE = 0.25 ACRES
TOTAL DISTURBANCE = 27.44 ACRES
TIMBER REMOVAL = 27.19

TM 13 -PCL 40
KENNETH & VICKY VANDYNE
42.33 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 5.01 ACRES
TOP SOIL STOCKPILES = 0.07 ACRES
TIMBER / BRUSH STORAGE = 0.53 ACRES
EXCESS MATERIAL STOCKPILE = 4.22 ACRES
TOTAL DISTURBANCE = 10.23 ACRES
TIMBER REMOVAL = 10.23 ACRE

TM 13 - PCL 83
VIRGINIA MILLER & RONALD RATLIFF
59 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 0.24
EXCESS MATERIAL STOCKPILE = 0.78 ACRES
WELL PAD = 5.97 ACRES
TOTAL DISTURBANCE = 6.99 ACRES
TIMBER REMOVAL = 6.99 ACRES

TM 13 - PCL 54
KENNETH & LORAINE HIGHLEY
20.172 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 0.37 ACRES
WELL PAD = 0.50 ACRES
TOTAL DISTURBANCE = 0.87 ACRES
TIMBER REMOVAL = 0.87 ACRES

APPROVED
WVDEP OOG
11 / 18 / 2015

Project Contacts

EQT

Chris Metzgar - EQT Production Company
304-848-0075 Off.

Billy Miller - Landman II-Drilling EQT Production Company
304-627-0357 Mobile
304-848-0039 Office

Surveyor & Engineer

Ben Singleton - PS - Allegheny Surveys Inc.
304-649-8606 Off.

Thomas D. Corathers - PE , PS- Hornor Brothers Engineers
304-624-6445 Office

Design Certification

The drawings, construction notes, and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas §35-4-21. The information reflects one AST pad with (2)- 60,000 Barrel Completion Water Tanks and (1) - 22,000 Barrel Frac Water Tank with secondary containment barrier. The proposed filling method shall be by pumping.

Hornor Brothers Engineers make no certifications relating to the design, construction or materials associated with the Above Ground Storage Tanks (AST's).

SHEET INDEX

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AST PAD PROFILE & CROSS SECTIONS	15-17
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MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two business days before you dig in the state of West Virginia.
IT'S THE LAW!!

811
Know what's below.
Call before you dig.

DATE	REVISIONS

Date: 11/11/2015
Scale: AS SHOWN
Designed By: TDC
File No:
Page: 1 of 53

Allegheny Surveys Inc.
P.O. Box 438
237 Birch River Road
Birch River, WV 26610
304-649-8606

Hornor Bros. Engineers
Since 1904
Civil Mining Environmental and Consulting Engineering

EQT
Where energy meets innovation

THIS DOCUMENT PREPARED FOR EQT PRODUCTION COMPANY

FINAL SITE DESIGN COVER
COVER SHEET / LOCATION MAPS
PNG-102
WELL PAD SITE
GREEN DISTRICT
WETZEL COUNTY, WV

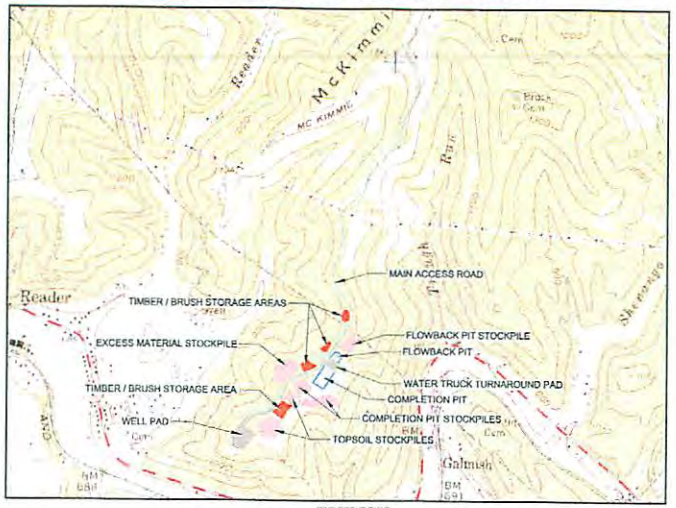
47103031 40

PNG 102 WELL PAD
FINAL SITE DESIGN , CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS
EQT PRODUCTION COMPANY

FLOODPLAIN CONDITIONS	
DO SITE CONSTRUCTON ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR	NO
HEC-RAS STUDY COMPLETED:	N/A
FLOODPLAIN SHOWN ON DRAWINGS	N/A
FIRM MAP NUMBER(S) FOR SITE:	54103C0180C
ACREAGES OF CONSTRUCTION IN FLOODPLAIN:	N/A

PROPOSED WELL LEGEND

H1 513492 - LAT: 39.565172 / LONG:-80.717305
H2 513493 - LAT: 39.565140 / LONG:-80.717338
H3 513494 - LAT: 39.565107 / LONG:-80.717371
H4 513495 - LAT: 39.565075 / LONG:-80.717404
H5 513496 - LAT: 39.565043 / LONG:-80.717438
H6 513497 - LAT: 39.565011 / LONG:-80.717471
H7 513964 - LAT: 39.564979 / LONG:-80.717504
H8 513965 - LAT: 39.564947 / LONG:-80.717537
H9 513966 - LAT: 39.564914 / LONG:-80.717571
H10 513967 - LAT: 39.565104 / LONG:-80.717238
H11 513968 - LAT: 39.565072 / LONG:-80.717272
H12 513969 - LAT: 39.565040 / LONG:-80.717305
H13 513970 - LAT: 39.565008 / LONG:-80.717338
H14 513971 - LAT: 39.564976 / LONG:-80.717371
H15 513972 - LAT: 39.564943 / LONG:-80.717405
H16 513973 - LAT: 39.564911 / LONG:-80.717438
H17 513974 - LAT: 39.564879 / LONG:-80.717471
H18 513975 - LAT: 39.564847 / LONG:-80.717504



SITE LOCATION
NAD 83

	LATITUDE	LONGITUDE
Beginning of Main Access Road	39.564303	-80.707414
Center of Completion Pit	39.565031	-80.713364
Center of Flowback Pit	39.563927	-80.711992
Center of Well Pad	39.565031	-80.717414

811
Know what's below.
Call before you dig.

West Virginia Coordinate System of 1983
State Plane Grid North
Elevations NAVD88
Established By Survey Grade GPS

AFFECTED PROPERTIES
GREEN DISTRICT - WETZEL COUNTY, WV

TM 14 - PCL 1
KENNETH & VICKY VANDYNE
73 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 8.62 ACRES
TOTAL DISTURBANCE = 8.62 ACRES
TIMBER REMOVAL = 2.79 ACRES

TM 14 - PCL 13
DONALD & MYRNA MASON
117 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 5.84 ACRES
TOTAL DISTURBANCE = 5.84 ACRES
TIMBER REMOVAL = 0.92 ACRES

TM 13 - PCL 17
LAURA ANN SLATER
90 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 2.55 ACRES
TOTAL DISTURBANCE = 2.55 ACRES
TIMBER REMOVAL = 2.55 ACRES

TM 13 - PCL 25.7
BEULAH PITTMAN
55 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 3.71 ACRES
TIMBER & BRUSH STORAGE = 0.34
TOTAL DISTURBANCE = 4.05 ACRES
TIMBER REMOVAL = 3.64 ACRES

TM 14 - PCL 16
VIRGINIA TRACY
29.58 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 3.34 ACRES
TIMBER & BRUSH STORAGE = 0.74 ACRES
TOTAL DISTURBANCE = 4.08 ACRES
TIMBER REMOVAL = 3.93 ACRES

TM 14 - PCL 19
DALLISON LUMBER CO
51.5 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 4.57 ACRES
FLOWBACK SPOIL = 3.03 ACRES
FLOWBACK PIT = 2.09 ACRES
WATERTRUCK TURNAROUND = 1.77 ACRES
COMPLETION PIT = 3.24 ACRES
COMPLETION PIT SPOIL = 0.68 ACRES
TOP SOIL STOCKPILE = 4.11 ACRES
TIMBER & BRUSH STORAGE = 1.65 ACRES
TOTAL DISTURBANCE = 21.14 ACRES
TIMBER REMOVAL = 29.24

TM 13 -PCL 40
KENNETH & VICKY VANDYNE
42.23 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 4.55 ACRES
COMPLETION PIT SPOIL = 0.32 ACRES
TOP SOIL STOCKPILE = 2.08 ACRES
TIMBER / BRUSH STORAGE = 0.81 ACRES
EXCESS MATERIAL STOCKPILE = 4.40 ACRES
TOTAL DISTURBANCE = 10.16 ACRES
TIMBER REMOVAL = 10.72 ACRE

TM 13 - PCL 83
VIRGINIA MILLER & RONALD RATLIFF
59 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 0.15
TOP SOIL STOCKPILE = 2.11 ACRES
WELL PAD = 5.33 ACRES
TOTAL DISTURBANCE = 7.59 ACRES
TIMBER REMOVAL = 7.60 ACRES

TM 13 - PCL 54
KENNETH & LORAINE HIGHLEY
20.172 ACRES
SITE DISTURBANCE

MAIN ACCESS ROAD = 0.43 ACRES
WELL PAD = 0.42 ACRES
TOTAL DISTURBANCE = 0.85 ACRES
TIMBER REMOVAL = 0.85 ACRES

Project Contacts

EQT

Chris Metzgar - EQT Production Company
304-848-0075 Off

Billy Miller - Landman II-Drilling EQT Production Company
304-627-0367 Mobile
304-848-0039 Office

Surveyor & Engineer

Ben Singleton - PS - Allegheny Surveys Inc
304-649-8606 Off

Thomas D. Corathers - PE , PS- Homer Brothers Engineers
304-624-6445 Office

Design Certification

The drawings, construction notes, and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas §35-4-21. The information reflects a temporary frac pit pond. The computed above grade storage volume is less than 15 acre feet, filling method pumped, frac. pond is lined.

DH
9-4-15

FINAL REVIEW
NOT FOR CONSTRUCTION

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MAIN ACCESS ROAD CROSS SECTIONS	21-34
CONSTRUCTION DETAILS	35-37
RECLAMATION PLANS	38-44

DATE	REVISIONS

Date: 4/17/2015
Scale:AS SHOWN
Designed By: TBC
File No
Page 1 of 44

Allegheny Surveys Inc.
P.O. Box 438
237 Birch River Road
Birch River, WV 26610
304-649-8606

Horner Bros. Engineers
Since 1902
Civil, Mining, Environmental and Consulting Engineering

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EQT

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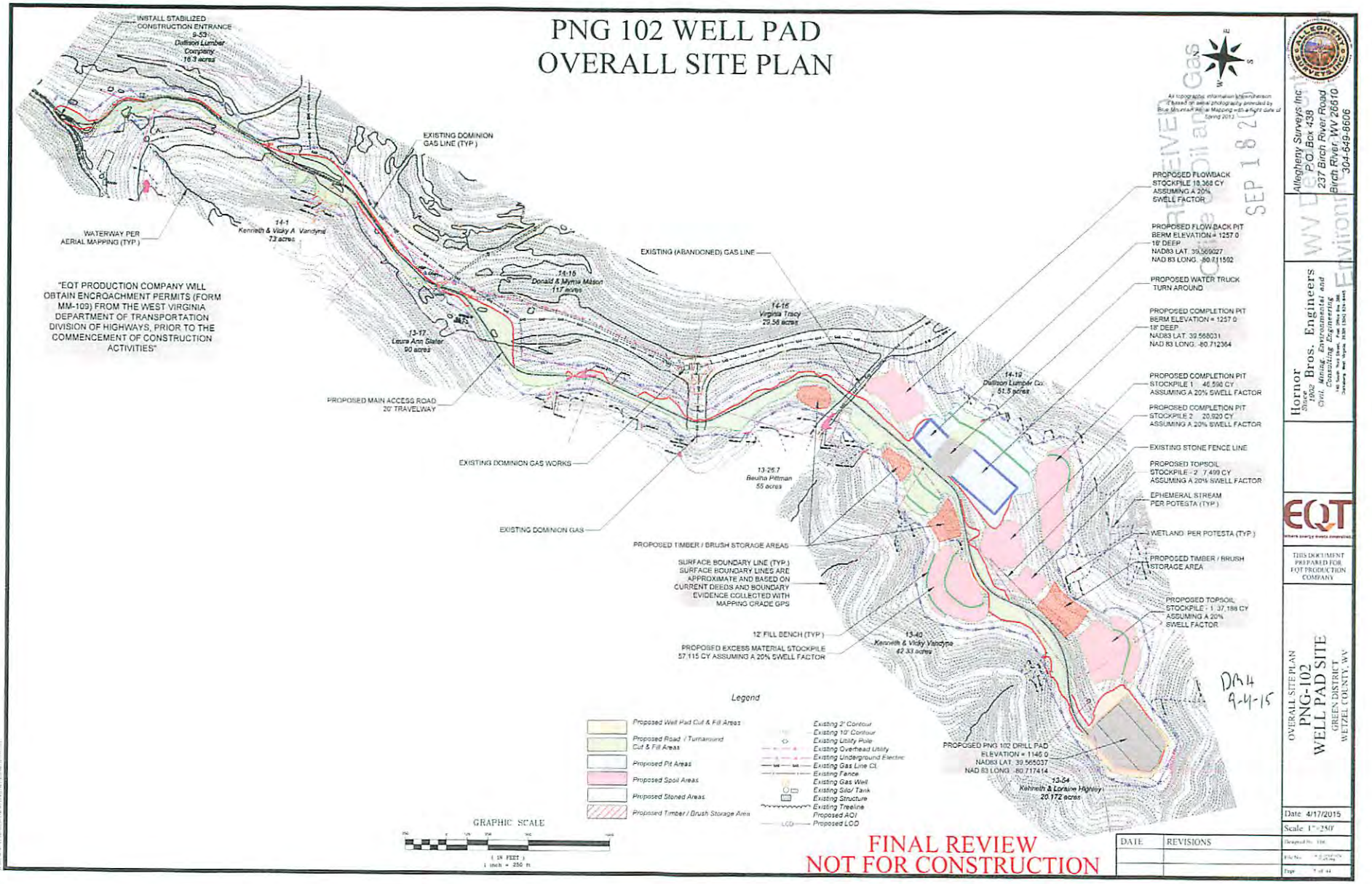
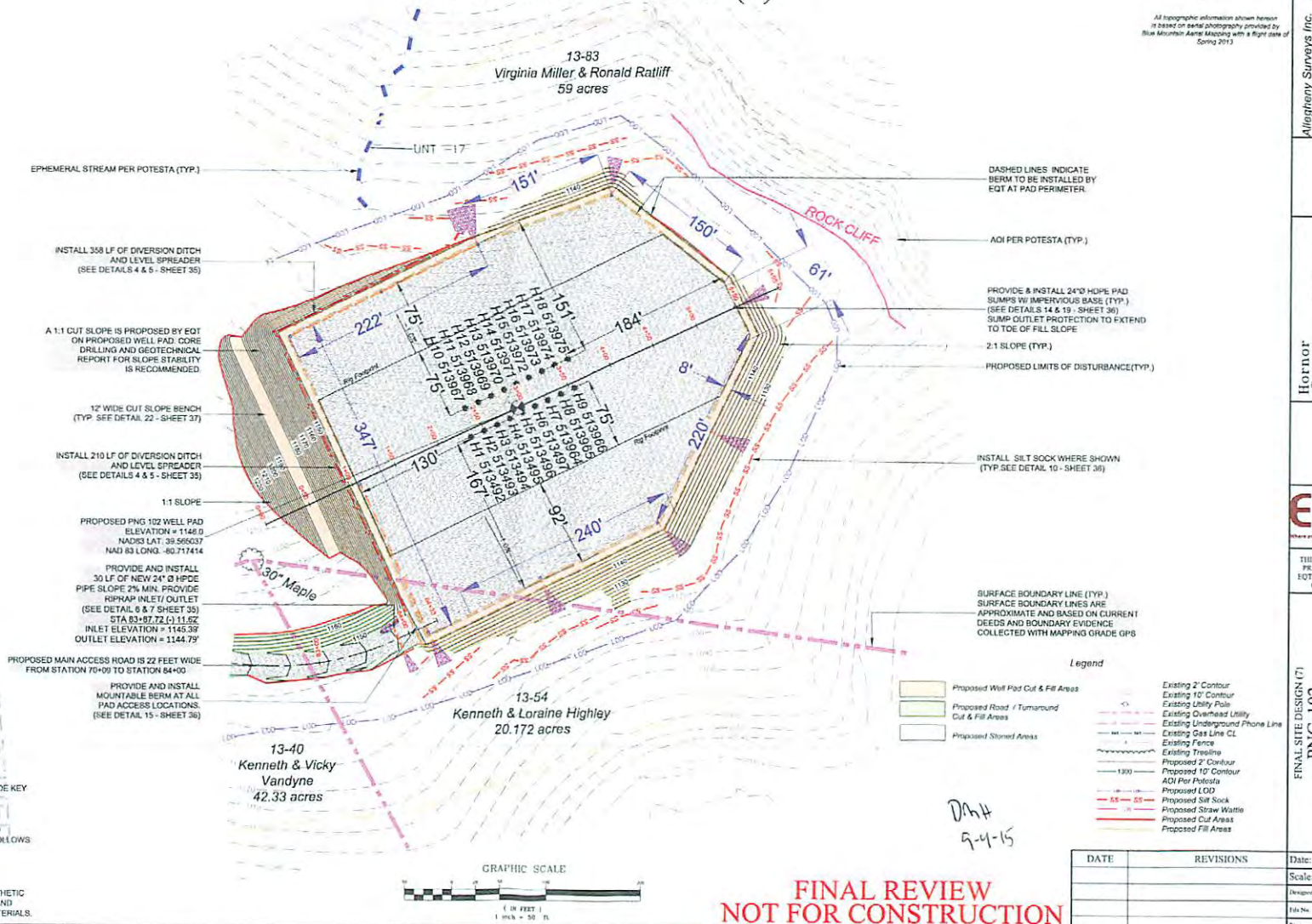
FINAL SITE DESIGN COVER SHEET / LOCATION MAPS
PNG-102
WELL PAD SITE
GREEN DISTRICT
WETZEL COUNTY, WV

4710303140

PNG 102 WELL PAD
OVERALL SITE PLAN



PNG 102 WELL PAD
FINAL SITE DESIGN (7)



All topographic information shown hereon is based on aerial photography provided by Blue Mountain Aerial Mapping with a flight date of Spring 2013

NOTES:

CONSTRUCTION OF ALL FILL EMBANKMENTS - (INCLUDING SPOIL STOCKPILES) REQUIRE TOE KEY BENCHES AND SIDEHILL BENCHES. (SEE DETAILS 24, 25 & 26 - SHEET 37)

ROAD SIDE DITCHES SHALL HAVE REQUIRED EROSION CONTROL MATTING APPLIED AS FOLLOWS
GRADES >10% RIP-RAP
GRADES 4%-10% SYNTHETIC TRM
GRADES 0%-4% JUTE MATTING

AREAS RECEIVING JUTE MATTING AND SYNTHETIC MATTING (TRM) ARE TO BE SEEDED, LIMED AND FERTILIZED PRIOR TO INSTALLATION OF MATERIALS.

DMH
9-4-15

FINAL REVIEW
NOT FOR CONSTRUCTION

DATE	REVISIONS

Allegheny Surveys Inc.
P.O. Box 438
237 Birch River Road
Birch River, WV 26610
304-649-8606

Hornor Bros. Engineers
Civil, Mining, Environmental and Consulting Engineering

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Where energy meets innovation.

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FINAL SITE DESIGN (7)
PNG-102
WELL PAD SITE
GREEN DISTRICT
WETZEL COUNTY, WV

Date: 4/17/2015
Scale: 1"=50'
Designed By: TBC
File No.
Page 12 of 44

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