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west virginia department of environmental protection

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Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

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

Thursday, June 01, 2017  
WELL WORK PERMIT  
Horizontal 6A / New Drill

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

Re: Permit approval for 516195  
47-061-01765-00-00

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

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: 516195  
Farm Name: LAWSON, GORDON W. & SHEILA M.  
U.S. WELL NUMBER: 47-061-01765-00-00  
Horizontal 6A / New Drill  
Date Issued: 5/30/2017

Promoting a healthy environment.

06/02/2017

# PERMIT CONDITIONS

4706101763

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

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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. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. 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.
10. 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.

# PERMIT CONDITIONS 06101765

11. 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](mailto:DEPOOGNotify@wv.gov).

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

1) Well Operator: EQT Production Company 306686 Monongalia Grant Rivesville  
Operator ID County District Quadrangle

2) Operator's Well Number: 516195 Well Pad Name: RVS14

3) Farm Name/Surface Owner: Gordon W & Sheila Lawson Public Road Access: US-19

4) Elevation, current ground: 1158.0 Elevation, proposed post-construction: 1157.0

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No No

*MGK 2/13/2017*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 7496', 136', 2593 PSI

8) Proposed Total Vertical Depth: 7496'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 11359'

11) Proposed Horizontal Leg Length: 3100'

12) Approximate Fresh Water Strata Depths: 110'

13) Method to Determine Fresh Water Depths: By offset wells

14) Approximate Saltwater Depths: 1355, 1435'

15) Approximate Coal Seam Depths: 189, 394, 462'

16) Approximate Depth to Possible Void (coal mine, karst, other): 462' (Pittsburgh)

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes  No

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(a) If Yes, provide Mine Info: Name: \_\_\_\_\_

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

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18)

**CASING AND TUBING PROGRAM**

| 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.)/CTS |
|--------------|-----------|-------------|-------|------------------------|----------------------------|---|-------------------------------|
| Conductor    | 26        | New         | A-500 | 85.6                   | 90                         | 90  | 110 ft <sup>3</sup> / CTS     |
| Fresh Water  | 18 5/8    | New         | J-55  | 87.5                   | 300                        | 300   | 487 ft <sup>3</sup> / CTS     |
| Coal         | 13 3/8    | New         | J-55  | 54.5                   | 520                        | 520   | 441 ft <sup>3</sup> /CTS      |
| Intermediate | 9 5/8     | New         | A-500 | 40                     | 2820                       | 2820  | 1116 ft <sup>3</sup> / CTS    |
| Production   | 5 1/2     | New         | P-110 | 20                     | 11359                      | 11359   | 500' above top producing zone |
| Tubing       | 2 3/8     |             | J-55  | 4.7                    |                            | May not be run, if run set 40' above top perf or 80° inclination. |                               |
| Liners       |           |             |       |                        |                            |   |                               |

MGK 2/13/2017

| 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    | 26        | 30                     | .312                | 884                  | 707                                      | Class A              | 1.18                     |
| Fresh Water  | 18 5/8    | 24                     | .435                | 2250                 | 1800                                     | See Variance 2014-17 | 1.19                     |
| Coal         | 13 3/8    | 17 1/2                 | .38                 | 2700                 | 2160                                     | See Variance 2014-17 | 1.19                     |
| Intermediate | 9 5/8     | 12 3/8                 | .395                | 3950                 | 3160                                     | See Variance 2014-17 | 1.19                     |
| Production   | 5 1/2     | 8 1/2                  | .361                | 12640                | 10112                                    | Class A/H            | 1.123/2.098              |
| Tubing       | 2 3/8     | NA                     | .19                 | 7700                 |  |                      |                          |
| Liners       |           |                        |                     |                      |  |                      |                          |

**PACKERS**

|             |  |  |  |  |
|-------------|--|--|--|--|
| Kind:       |  |  |  |  |
| Sizes:      |  |  |  |  |
| Depths Set: |  |  |  |  |

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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. Drill the vertical to an approximate depth of 5864'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

Mine Void Cement Plan:

-Run cement basket above potential mine void. If no cement is returned during the cement job, run 1" tubing to the top of the basket and grout cement to surface.

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, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 250,000 gallons of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 250,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 25.6

22) Area to be disturbed for well pad only, less access road (acres): 11.94

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One centralizer at the shoe and one spaced every 500'.
- Mine Protection: Bow spring centralizers – One centralizer at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One centralizer at the shoe and one spaced every 500'.
- Production: One solid body centralizer spaced every joint from production casing shoe to KOP

24) Describe all cement additives associated with each cement type:

Conductor: Class A no additives  
Surface (Type 1 Cement) 0-3% Calcium Chloride. Used to speed the setting of cement slurries  
Mine Protection (Type 1 Cement) 0-3% Calcium Chloride. Used to speed the setting of cement slurries  
Intermediate (Type 1 Cement) 0-3% Calcium Chloride. Used to speed the setting of cement slurries  
Production:  
Lead (Class A Cement) 0.2% CD-20 (dispersant makes cement easier to mix) 15% SuperFL-300 (fluid loss/lengthens thickening time) 15% SEC-10 (fluid loss) 50.50 POZ (extender)  
Tail (Class H Cement) 0.2% Super CR-1 (Retarder) Lengthens thickening time 3% Super FL-200 (fluid loss) .2% SEC-10 (fluid loss) .2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation 60 % Calcium Carbonate Acid solubility

25) Proposed borehole conditioning procedures:

Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Mine Protection: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.

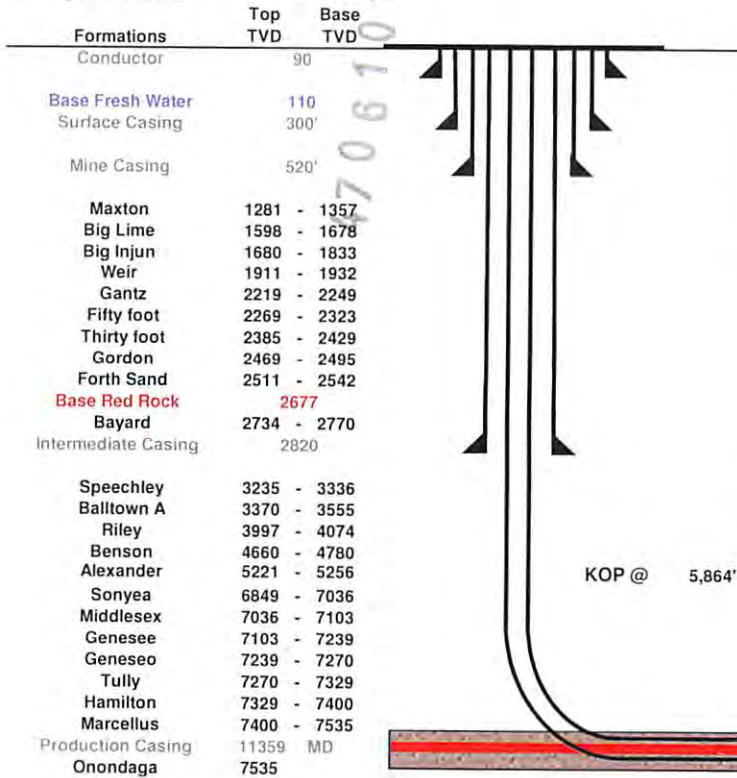
Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

\*Note: Attach additional sheets as needed.

Well 516195(RVS14H4)  
 EQT Production  
 Rivesville Quad  
 Monongalia County, WV

Azimuth 335  
 Vertical Section 3699

Note: Diagram is not to scale



| Casing and Cementing       |              |                       |                   |                  |   |
|----------------------------|--------------|-----------------------|-------------------|------------------|---|
| Type                       | Conductor    | Surface               | Mine              | Intermediate     | Production  |
| Hole Size, In.             | 30           | 24                    | 17 1/2            | 12 3/8           | 8 1/2   |
| Casing Size, OD In.        | 26           | 18.625                | 13 3/8            | 9 5/8            | 5 1/2   |
| Casing Wall Thickness, In. | 0.312        | 0.435                 | 0.380             | 0.395            | 0.361   |
| Depth, MD                  | 90'          | 300'                  | 520'              | 2,820'           | 11,359'   |
| Weight                     | 85.6#        | 87.5#                 | 54.5#             | 40#              | 20#   |
| Grade                      | A-500        | J-55                  | J-55              | A-500            | P-110   |
| New or Used                | New          | New                   | New               | New              | New   |
| Burst (psi)                | 884          | 2,250                 | 2,700             | 3,950            | 12,640  |
| Cement Class               | A            | A / Type 1            | A / Type 1        | A / Type 1       | A / H   |
| Cement Yield               | 1.18         | 1.19                  | 1.19              | 1.19             | 1.123 / 2.098   |
| Top of Cement (Planned)    | Surface      | Surface               | Surface           | Surface          | 500' above top Producing Zone   |
| Method                     | Displacement | Displacement          | Balanced/1" Grout | Displacement     | Displacement  |
| Est. Volume (cu ft)        | 110          | 487                   | 441               | 1,116            | 2,070   |
| Possible Additives         | N/A          | Calcium Chloride, LCM | Calcium Chloride  | Calcium Chloride | Calcium Carbonate, Fluid Loss Extender, Dispersent, Viscosifier, Defoamer, POZ, Bonding Agent, Retarder, Anti-Settling/Suspension Agent |

KOP @ 5,864'

Land curve @ 7,496' TVD  
 8,259' MD

Est. TD @ 7,496' TVD  
 11,359' MD

Proposed Well Work:

Drill and complete a new horizontal well in the Marcellus formation.

Drill the vertical to an approximate depth of 5864'.

Kick off and drill curve. Drill lateral in the Marcellus. Cement casing.

3,100' Lateral

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**EQT Production**  
**Hydraulic Fracturing Monitoring Plan**  
**Pad ID: RVS14**  
**Monongalia County, WV**

12/2/16

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## Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near EQT hydraulic fracturing in Monongalia County, WV prior to hydraulic fracturing at the following EQT wells on RVS14 pad: 516192, 516193, 516194 & 516195

Due to the requirements under 35CSR8 5.11, the permittee is required to review the area surrounding the proposed well pad so as to identify and evaluate potential conduits for unintended fracture propagation. A report is required to be submitted along with a well work permit application.

The plan is being implemented as an additional safety measure to be utilized in conjunction with existing best management practices and emergency action plans for the site. These additional measures include coordination with well operators of the timing and location of the hydraulic fracturing, establishment of measures well operators should implement, and assurance that the OOG is notified of the timeline, as well as any issues that may arise during fracturing.

### 1. Communications with Well Operators

EQT, using available data (WV Geological Survey, WVDEP website, and IHS data service), has identified all known wells and well operators within 500 feet of this pad and the lateral sections that are known or could reasonably be expected to be within range of the fracture propagation. A map showing these wells along with a list of the wells and operators is included in **Attachment A**.

EQT will notify these operators of the hydraulic fracturing schedule for these wells, and coordinate with them throughout the fracturing process.

EQT will recommend to these operators at a minimum to:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure
3. Inspect or install master valves or other necessary equipment for wellhead integrity capable of a pressure recommended by EQT
4. Notify the OOG and EQT if any changes in water, gas production, pressure, or other anomalies are identified

### 2. Reporting

EQT will provide information relating to the hydraulic fracturing schedule, communication with other operators, and ongoing monitoring of the work upon request of OOG or immediately in the event of any noted abnormalities.

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UWI  
 4706100384  
 4706100387  
 4706100589  
 4706170488  
 4706170490  
 4706170496

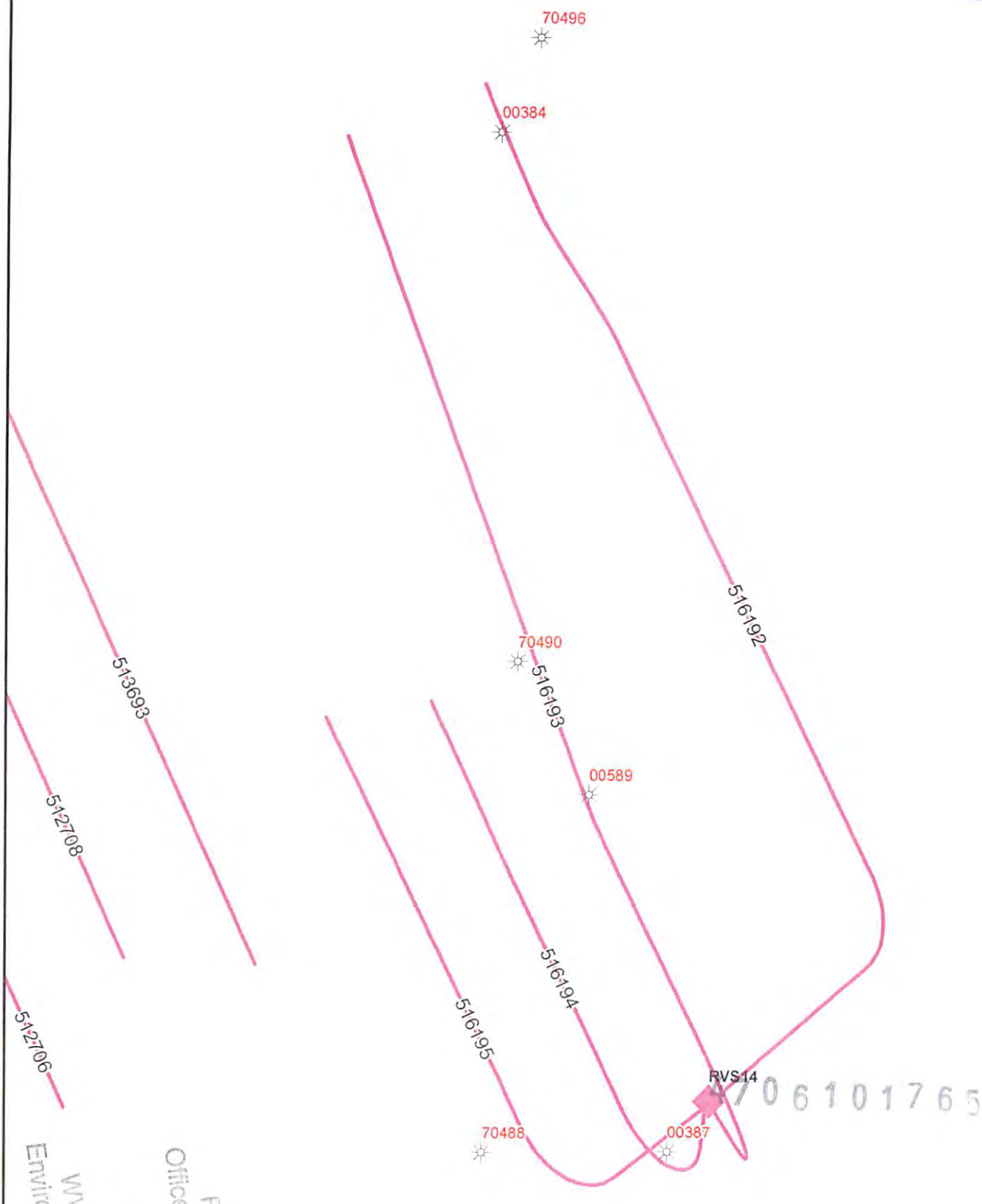
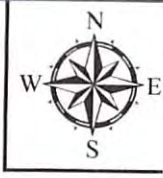
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| COMP       | COUNTY     | CURR_OPER                         | PERMIT_DT | PROJ_PM_NM | PROJ_TD | SPUD_DATE  | TD_FORM_NM | Permit |
|------------|------------|-----------------------------------|-----------|------------|---------|------------|------------|--------|
| 4706100384 | MONONGALIA | EQT PRODUCTION COMPANY            | 8/14/1913 |            | 0       | 5/30/1913  | CHEMUNG    | 00384  |
| 4706100387 | MONONGALIA | EQT PRODUCTION COMPANY            | 2/13/1914 |            | 0       | 12/31/1914 | HAMPSHIRE  | 00387  |
| 4706100589 | MONONGALIA | PETROLEUM DEVELOPMENT CORPORATION | 2/15/1980 | BENSON     | 5100    | 1/12/1980  | DEVONIAN   | 00589  |
| 4706170488 | MONONGALIA | HOPE NATURAL GAS CORPORATION      |           |            | 0       |            |            | 70488  |
| 4706170490 | MONONGALIA | FRENCH E BARRY                    |           |            | 0       |            |            | 70490  |
| 4706170496 | MONONGALIA | UNKNOWN                           |           |            | 0       |            |            | 70496  |

| ELEVATION | ELEV_REF_CD | FNL_STAT | HOLE_DIR | LAST_ACT  | LATITUDE | LONGITUDE | LSE_NAME        | OPER_NAME                           |
|-----------|-------------|----------|----------|-----------|----------|-----------|-----------------|-------------------------------------|
| 1120 GR   |             | V        |          | 2/13/2015 | 39.6143  | -80.1868  | N MITCHELL      | CONSOLIDATED GAS SUPPLY CORPORATION |
| 1115 GR   |             | V        |          | 2/13/2015 | 39.5952  | -80.1049  | A ARNETT        | CONSOLIDATED GAS SUPPLY CORPORATION |
| 1100 GR   |             | V        |          | 5/21/2015 | 39.6019  | -80.1067  | BARBE JESSIE    | PETROLEUM DEVELOPMENT CORPORATION   |
|           |             | V        |          | 2/2/2015  | 39.5952  | -80.1094  | FRENCH E BARRY  | HOPE NATURAL GAS                    |
|           |             | V        |          | 1/15/2015 | 39.6044  | -80.1084  | JESSIE L BARB 1 | CARNEGIE NATURAL GAS CORPORATION    |
|           |             | V        |          | 1/20/2015 | 39.6160  | -80.1079  | A J TRICKETT 1  | UNKNOWN                             |

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Attachment A (1) 06/02/2017



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RVS14 Pad  
Vertical Offsets and Foreign Laterals within 500'

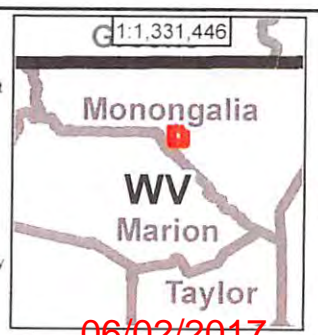
EQT BQT Corporation  
625 Liberty Avenue  
Pittsburgh, PA 15222

- Legend
- RVS14 Vertical Offsets
  - GENESECO
  - MARCELLUS
  - MIDDLESEX
  - POINT PLEASANT
  - UTICA



Disclaimer

This map is confidential and is to be used only for the express informational purposes for which it was created. Unauthorized use, copying, or dissemination is strictly prohibited. EQT does not warrant the accuracy of the location of any items shown on this map, including, but not limited to, any structures, well or pipeline facilities, property boundaries, topography, roadways, or waterways. The items shown on the map may not have been placed on the map using survey lines or GPS coordinates. The specific location of any of the map items should be determined by a field survey performed by a licensed surveyor upon consultation with EQT.



Created By: Ryan Means Printed By: meansR on 12/5/2016

Path: \\MDC\FCS2\gisdept\GIS\_Department\GIS\_Users\MeansR\Scratch\Vertical Offsets\Foreign Well Working Map.mxd

Attachment A (a)



September 30, 2016

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

Re: Casing plan on Wells (RVS14)

Dear Mr. Smith,

EQT is requesting the 18 5/8" casing be set at 300' KB, 190' below the deepest fresh water and the minimum required set depth for a fresh water string. We will set the 13-3/8" casing at 520' KB, 50' below the mined Pittsburgh coal seam. We will set the 9-5/8" intermediate string at 2820' 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,

A handwritten signature in blue ink, appearing to read 'Vicki Roark'.

Vicki Roark  
Permitting Supervisor

Enc.

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601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
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(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  
Environmental Resources Specialist / Permitting

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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 )**

**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.

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

**FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN**

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Stewart Run Quadrangle Rivesville

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

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 \_\_\_\_\_)

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

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

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

Additives to be used in drilling medium? See Attached

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

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

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

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on 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

Subscribed and sworn before me this 13 day of Dec, 2016

My commission expires 8-24-22





Form WW-9

Operator's Well No. 516195

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed 25.6 Prevegetation pH 6.2

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

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

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Haynes J. Knutson

Comments: Pending Army Corp. approvals needed

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MAR 30 2017

Title: INSPECTOR

Date: 3/28/2017

Field Reviewed? ( X ) Yes ( ) No

WV Department of  
Environmental Protection

WW-9 Attachment

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

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

Additives to be used in drilling medium?

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

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**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

**BROAD STREET ENERGY LLC**

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

**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

**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

**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

**KING EXCAVATING CO.**

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

**Waste Management - Meadowfill Landfill**

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

4706101765

**Waste Management - Northwestern Landfill**

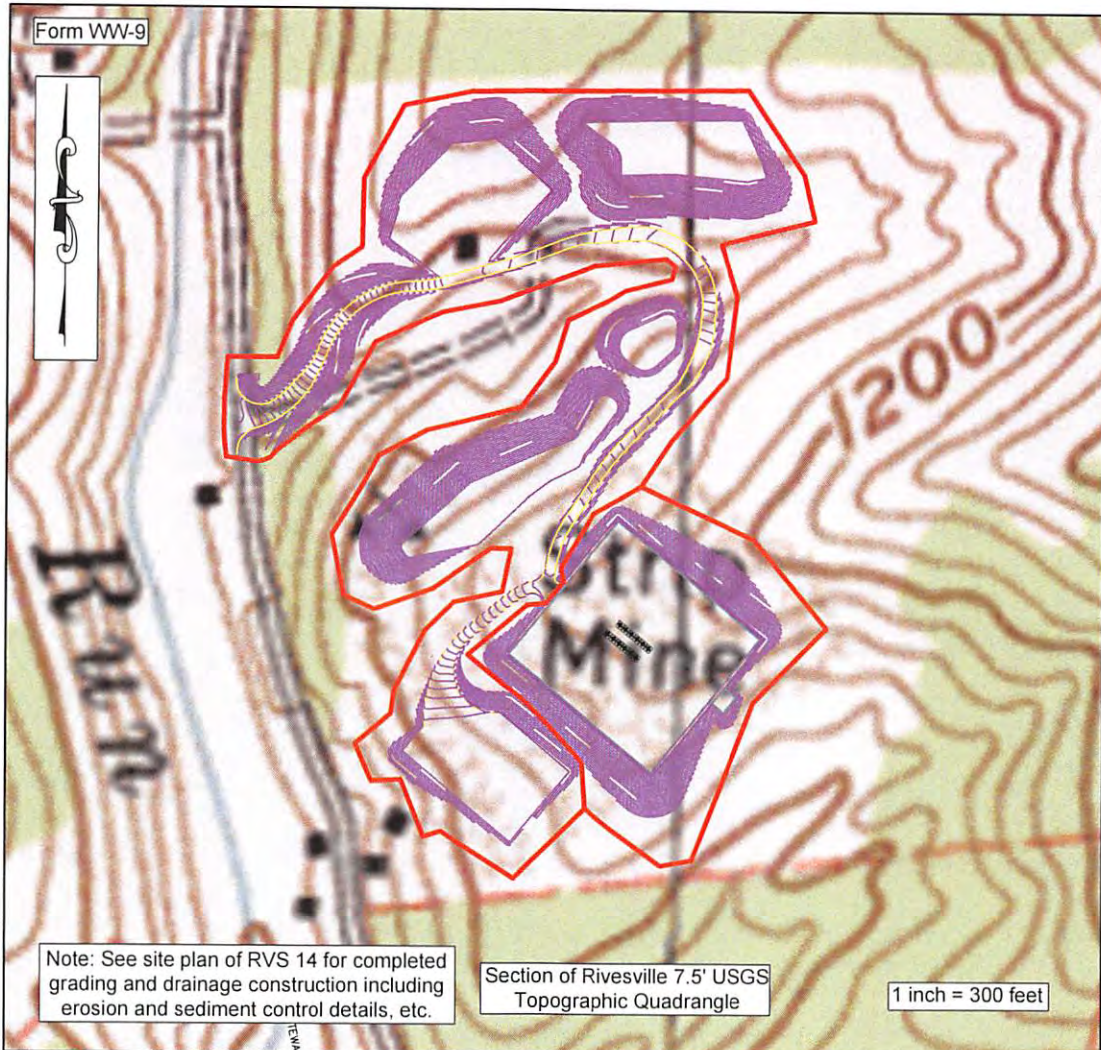
512 E. Dry Road  
Parkersburg, WV 26104  
304-428-0602  
Permit #SWF-1025 WV-0109400  
Approval #100833WV

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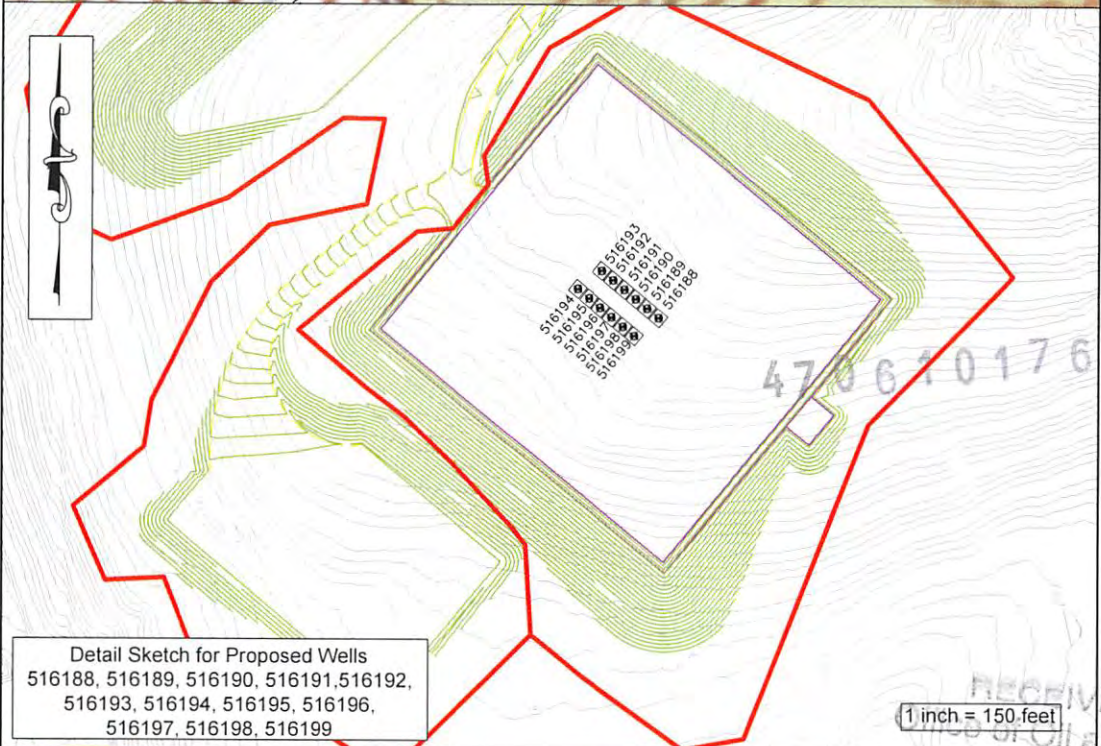
Form WW-9



Note: See site plan of RVS 14 for completed grading and drainage construction including erosion and sediment control details, etc.

Section of Rivesville 7.5' USGS Topographic Quadrangle

1 inch = 300 feet



Detail Sketch for Proposed Wells  
516188, 516189, 516190, 516191, 516192,  
516193, 516194, 516195, 516196,  
516197, 516198, 516199

1 inch = 150 feet

**LDG** Architects Engineers Surveyors  
 2502 Cranberry Square  
 Morgantown, WV 26508  
 PHONE 304.777.2940  
 TOLL FREE 877.323.6603  
 FAX 570.323.9902  
 www.larsondesigngroup.com

**RVS 14 WELL PAD**  
 Well No. 516188, 516189, 516190, 516191, 516192,  
 516193, 516194, 516195, 516196, 516197, 516198,  
 516199  
 Grant District, Monongalia County, WV

|             |           |
|-------------|-----------|
| DATE:       | 5/25/2016 |
| DESIGNER:   | JWD       |
| PROJECT NO: | 7936-004  |
| SHEET:      | 1 of 1    |

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WV Department of Oil and Gas

DEC 14 2016

WV Department of Environmental Protection  
06/02/2017



Where energy meets innovation.™

# Site Specific Safety Plan

EQT  
RVS14 Unit Pad  
  
Core  
Monongalia County, WV

For Wells:

516195

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*[Signature]*  
 \_\_\_\_\_  
 EQT Production  
*[Signature]*  
 \_\_\_\_\_  
 Permitting Supervisor  
 Title  
 12/12/16  
 \_\_\_\_\_  
 Date

Date Prepared: October 13, 2016

*[Signature]*  
 \_\_\_\_\_  
 WV Oil and Gas Inspector  
 Inspector  
 \_\_\_\_\_  
 Title  
 3/28/2017  
 \_\_\_\_\_  
 Date

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 MAR 30 2017  
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 Environmental Protection

EQT PRODUCTION COMPANY  
WELL # 516195  
PAGE 1 OF 2

LATITUDE 39°37'30" TH 5731'  
LATITUDE 39°37'30" BH 8316'

LONGITUDE 80°05'00" BH 7890'  
LONGITUDE 80°05'00" TH 10525'

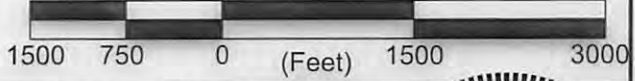
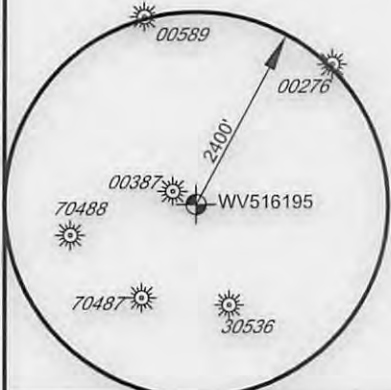
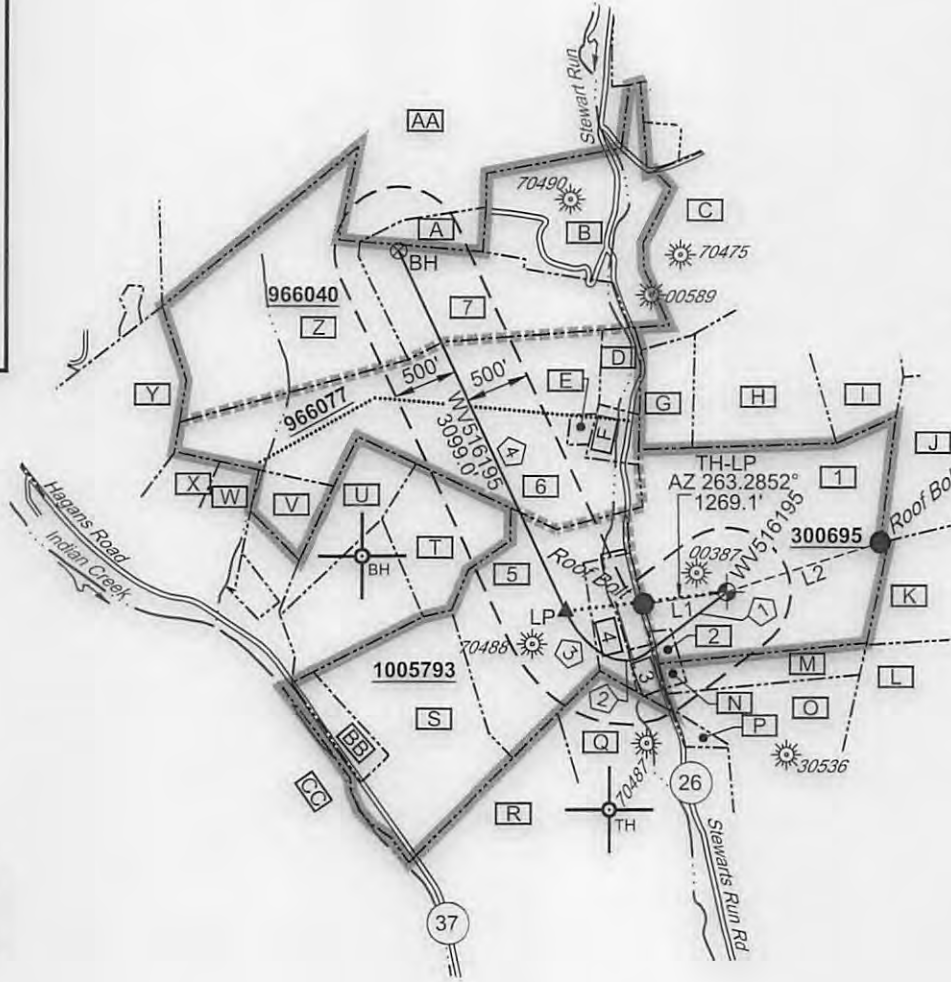
LEGEND

- OUTER LEASE BOUNDARY
- LEASE BOUNDARY
- SURFACE TRACT LINES
- WELL REFERENCE LINES
- ⊙ - COUNTY ROADS
- PUBLIC ROADS
- BLUE-LINE STREAMS
- ☉ - PROPOSED WELL
- ☀ - EXISTING WELL
- ▲ - LANDING POINT
- ⊗ - BOTTOM HOLE
- 1 - PROPERTY CROSSED BY BORE
- A - ADJOINER PROPERTY
- 870015 - LEASE NUMBER
- # - BORE GEOMETRY TAB

HORIZONTAL BORE GEOMETRY

- ① AZ 232.7972° 800.7'
- ② R-276' L-288.2'
- ③ R-695' L-513.6'
- ④ AZ 335.0000° 3099.0'

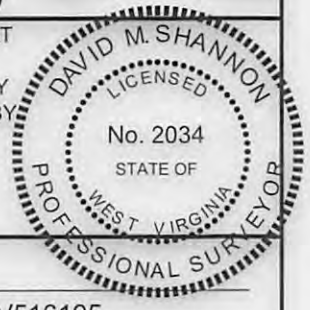
| PROPERTY TIES |          |         |
|---------------|----------|---------|
| L1            | S81°45'W | 657.4'  |
| L2            | N72°09'E | 1259.5' |



FILE NO. 7936-004  
 DRAWN BY DMS  
 SCALE 1 INCH = 1500 FEET  
 MIN DEGREE OF ACCURACY 1 IN 2500  
 PROVEN SOURCE OF ELEVATION SURVEY GRADE GPS

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 DIVISION OF ENVIRONMENTAL PROTECTION

*David M. Shannon* PS #2034



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



W.V.D.E.P.  
 OFFICE OF OIL AND GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304

DATE 12-7-2016  
 OPERATORS WELL NO. WV516195  
 API WELL NO. 47 061 01765 MGA  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION   
 IF "GAS", PRODUCTION  STORAGE  DEEP

WASTE DISPOSAL   
 SHALLOW

LOCATION: WATERSHED INDIAN CREEK (HUC12) STEWART RUN (LOCAL)  
 COUNTY/DISTRICT MONONGALIA / GRANT

ELEVATION (EXIST) 1158.0 (PROP) 1157.0  
 QUADRANGLE RIVESVILLE - SEC 1

SURFACE OWNER GORDON W. & SHEILA M. LAWSON

ACREAGE 72.02±  
 ACREAGE 73.00± LEASE# 300695

OIL & GAS ROYALTY OWNER BETTY JO BINZ

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

TARGET FORMATION: MARCELLUS  
 WELL OPERATOR: EQT PRODUCTION COMPANY  
 ADDRESS 115 PROFESSIONAL PLACE, PO BOX 280  
 BRIDGEPORT, WV 26330

ESTIMATED DEPTH 7400  
 DESIGNATED AGENT REX C. RAY  
 ADDRESS 115 PROFESSIONAL PLACE, PO BOX 280  
 BRIDGEPORT, WV 26330

06/02/2017

COUNTY NAME PERMIT



**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)**

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

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

| Lease Name or<br>Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|-------------------------|-----------------------|-----------------------|---------|-----------|
| See Attached            |                       |                       |         |           |

4706101783

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

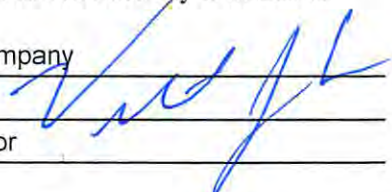
The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

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

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

Well Operator: EQT Production Company  
 By: Victoria J Roark  
 Its: Permitting Supervisor

Department of Environmental Protection  
Office of Oil and Gas





4700017

| Lease No.      | Grantor, Lessor, etc.  | Grantee, Lessee, etc.                           | Royalty | Book/Page  |
|----------------|--|---|---------|------------|
| <b>300695</b>  | <b><u>Raymond P. Gaston (current royalty owner)</u></b>            |   | **      |            |
|                | A J Arnett, et ux (original lessor)                                | Fayette County Gas Company                      |         | LB84/290   |
|                | Fayette County Gas Company   | Hope Natural Gas Company                        |         | DB117/241  |
|                | Hope Natural Gas Company   | CNG Transmission Corp                           |         | DB1128/240 |
|                | CNG Transmission Corp  | Eastern States Oil & Gas Inc                    |         | AB43/313   |
|                | Eastern States Oil & Gas Inc                                       | Equitable Production - Eastern States Oil & Gas |         | CB13/14    |
|                | Equitable Production - Eastern States Oil & Gas                    | Equitable Production Company                    |         | CB13/14    |
|                | Equitable Production Company                                       | EQT Production Company                          |         | CB13/14    |
| <b>1005793</b> | <b><u>Fred E. Fisher, et al (current royalty owner)</u></b>        |   | **      |            |
|                | Fred Fisher, et al   | Unit Resources, Inc                             |         | DB1357/49  |
|                | Unit Resources, Inc  | Gastar Exploration USA, Inc                     |         | AB104/723  |
|                | Gastar Exploration USA, Inc  | Atinum Marcellus, LLC                           |         | AB109/663  |
|                | Atinum Marcellus, LLC  | EQT Production Company                          |         | AB123/821  |
| <b>966077</b>  | <b><u>Lynn Ann Nicholas, et al (current royalty owner)</u></b>     |   | **      |            |
|                | Lynn Ann Nicholas (original lessor)                                | Cabot Oil & Gas Corporation                     |         | DB1351/293 |
|                | Cabot Oil & Gas Corporation  | Hunt Marcellus, LLC                             |         | AB111/267  |
|                | Hunt Marcellus, LLC  | EQT Production Company                          |         | AB121/689  |
| <b>966040</b>  | <b><u>William Carter Harris, et ux (current royalty owner)</u></b> |   | **      |            |
|                | William Carter Harris, et ux (original lessor)                     | Hunt Marcellus, LLC                             |         | DB1450/83  |
|                | Hunt Marcellus, LLC  | EQT Production Company                          |         | AB121/689  |

\*\* We certify that we will pay a minimum one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced or marketed before deducting the amount to be paid to or set aside for the owner of the oil or gas in place, on all such oil or gas to be extracted, produced or marketed from the well.

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 DEC 14 2016  
 WV Department of  
 Environmental Protection



4706101765

December 1, 2016

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

Re: RVS14 well pad, well numbers 516192; 516293; 516294; 516295  
Grant District, Monongalia County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. 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.

Sincerely,

Vicki Roark  
Permitting Supervisor-WV

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WV Department of  
Environmental Protection

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

Date of Notice Certification: 12-13-16

API No. 47- 061 - \_\_\_\_\_  
Operator's Well No. 516195  
Well Pad Name: RVS14

**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: <u>WV</u>              | UTM NAD 83 Easting: <u>576957.08</u>                            |
| County: <u>Monongalia</u>     | Northing: <u>4383324.58</u>                                     |
| District: <u>Grant</u>        | Public Road Access: <u>US-19</u>                                |
| Quadrangle: <u>Rivesville</u> | Generally used farm name: <u>Gordon W. and Sheila M. Lawson</u> |
| Watershed: <u>Stewart Run</u> |   |

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.

|   |   |
|---|---|
| <p>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:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p> | <p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/<br/>NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/<br/>NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> |
|---|---|

**Required Attachments:**

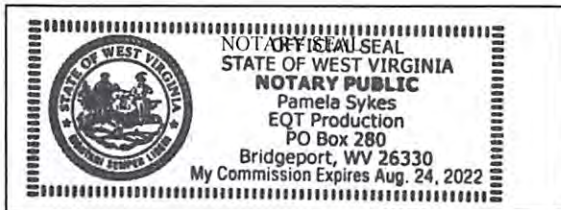
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication 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.

06/02/2017

**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: | <u>EQT Production Company</u> | Address:   | <u>115 Professional Place PO Box 280</u> |
| By:            | <u>Victoria J Roark</u>       |            | <u>Bridgeport WV 26330</u>               |
| Its:           | <u>Permitting Supervisor</u>  | Facsimile: | <u>304-848-0041</u>                      |
| Telephone:     | <u>304-848-0076</u>           | Email:     | <u>vroark@eqt.com</u>                    |



Subscribed and sworn before me this 12 day of Dec. 2016.

*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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).

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Office of Oil and Gas  
DEC 14 2016  
WV Department of  
Environmental Protection

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:** 12-13-16 **Date Permit Application Filed:** 12-13-16

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)**

- 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 a certificate of approval 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 method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well 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; (2) The owners of 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 be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or 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 seams; (4) The owners of 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 be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well 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 this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, 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 notice to a landowner, 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 Safety Plan ("WSSP") 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.

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

SURFACE OWNER(s)

Name: See Attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: See Attached  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: See Attached  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: See Attached  
Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: See Attached  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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 Office of Oil and Gas  
 Department of Environmental Protection  
 Dec 14 2016

570070738

**Surface Owners:**

Gordon W & Sheila M Lawson  
37 Hidden Valley Rd  
Morgantown WV 26507

**Surface Owners (road or other disturbance):**

Gordon W & Sheila M Lawson  
37 Hidden Valley Rd  
Morgantown WV 26507

**Surface Owners (Pits or impoundments):**

Gordon W & Sheila M Lawson  
37 Hidden Valley Rd  
Morgantown WV 26507

5020 6E9S 0000 04T2 9T02

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**OFFICIAL USE**

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Extra Services & Fees (check box, add fee as appropriate)

|  |          |
|--|----------|
| <input type="checkbox"/> Return Receipt (hardcopy)           | \$ _____ |
| <input type="checkbox"/> Return Receipt (electronic)         | \$ _____ |
| <input type="checkbox"/> Certified Mail Restricted Delivery  | \$ _____ |
| <input type="checkbox"/> Adult Signature Required            | \$ _____ |
| <input type="checkbox"/> Adult Signature Restricted Delivery | \$ _____ |

Postage \$ \_\_\_\_\_

Total Po \$ \_\_\_\_\_

Sent To \_\_\_\_\_

Street and \_\_\_\_\_

City, State \_\_\_\_\_

Postmark Here

BRIDGEPORT WVA 3 2316

Gordon W & Sheila M Lawson  
37 Hidden Valley Rd  
Morgantown WV 26507

RVS14 Permit Ap & Planned Op

PS

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

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DEC 14 2016  
WV Department of  
Environmental Protection

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06/02/2017

**Coal Owner:**

Consol Mining Company  
1000 Consol Energy Dr.  
Canonsburg PA 15317

CNX Gas Company  
1000 Consol Energy Dr.  
Canonsburg PA 15317

Patriot Mining Co  
2708 Cranberry Square  
Morgantown WV 26508

Murray American Energy Inc WV  
C/O Murray Energy Corp  
1 Bridge St  
Monongah WV 26554

Murray American Energy Inc OH  
C/O Murray Energy Corporation  
46226 National Rd  
St Clairsville OH 43950



**Owners of Water Wells**

Leonard D & Rhonda Fox  
362 Stewart Run Rd  
Morgantown, WV 26501

4706101765

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Office of Oil and Gas  
Office of Oil and Gas  
WV Dept of Environmental Protection  
Environmental Protection  
Department of Environmental Protection

06/02/2017

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**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

Environmental Protection



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, 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.

**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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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.**

Department of Environmental Protection  
Office of Oil and Gas  
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**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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 Office of Oil and Gas  
 DEC 14 2016  
 WV Department of  
 Environmental Protection

20161214 10:17 AM

WW-6A  
(8-13)

API NO. 47-061 -  
OPERATOR WELL NO. 516195  
Well Pad Name: RVS14

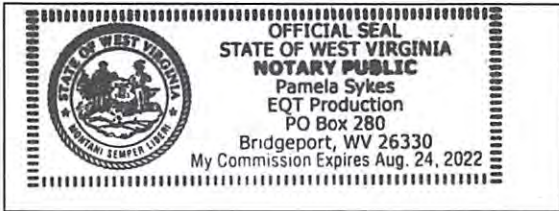
**Notice is hereby given by:**

Well Operator: EQT Production Company  
Telephone: 304-848-0076  
Email: vroark@eqt.com

Address: 115 Professional Place PO Box 280  
Bridgeport WV 26330  
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](mailto:depprivacyofficer@wv.gov).



*[Handwritten signature]*

Subscribed and sworn before me this 13 day of Dec, 2016.

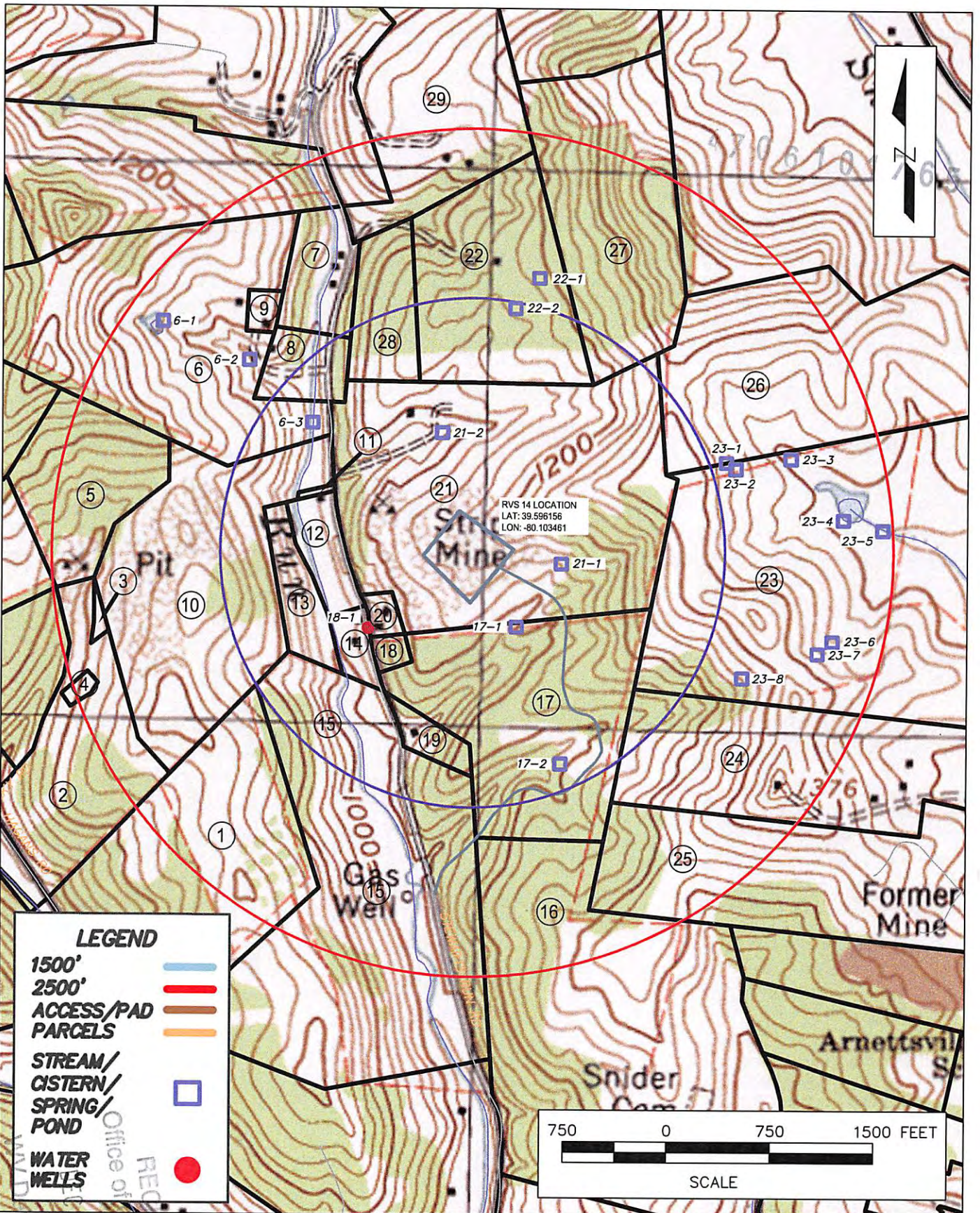
*[Handwritten signature]* Notary Public

My Commission Expires 8-24-22

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Environmental Protection

06/02/2017



**Architects Engineers Surveyors**  
 2502 CRANBERRY SQUARE  
 MORGANTOWN, WV 26508  
 PHONE 304.777.2940  
 TOLL FREE 877.323.6603  
 FAX 570.323.9902  
 www.larsondesigngroup.com

**RVS 14 TOPO WATER PURVEYOR MAP**  
 GRANT DISTRICT, MONONGALIA COUNTY, WEST VIRGINIA  
**EQT CORPORATION**  
 115 Professional Place, Bridgeport, WV 26330

DATE: 5/20/15  
 SHEET NO.: 1 of 1  
 PROJECT NO.: 7936-004  
 SCALE: 1"=750'

06/02/2017

**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:** 10/24/2016      **Date Permit Application Filed:** 11/02/2016

**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: Gordon W. and Sheila M. Lawson  
 Address: 37 Hidden Valley Rd.  
Morgantown WV 26507

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

**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: Monongalia  
 District: Grant  
 Quadrangle: Rivesville  
 Watershed: Stewart Run

UTM NAD 83      Easting: 576957.08  
 Northing: 4383324.58  
 Public Road Access: US 197  
 Generally used farm name: Gordon W. and Sheila M. Lawson 705

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: EQT Production Company  
 Address: 115 Professional Place PO 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 PO 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](mailto:depprivacyofficer@wv.gov).

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 RECEIVED  
 11/14/2016

06/02/2017

**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:** 12-13-16      **Date Permit Application Filed:** 12-13-16

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

- CERTIFIED MAIL                                       HAND  
RETURN RECEIPT REQUESTED                                      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.

**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: <u>Gordon W &amp; Sheila M Lawson</u>                       | Name: _____    |
| Address: <u>37 Hidden Valley Rd</u><br><u>Morgantown WV 26507</u> | Address: _____ |

**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: <u>WV</u>              | UTM NAD 83  | Easting: <u>576957.08</u>   |
| County: <u>Monongalia</u>     |   | Northing: <u>4383324.58</u> |
| District: <u>Grant</u>        | Public Road Access: <u>US-19</u>                                |                             |
| Quadrangle: <u>Rivesville</u> | Generally used farm name: <u>Gordon W. and Sheila M. Lawson</u> |                             |
| Watershed: <u>Stewart Run</u> |   |                             |

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

|  |   |
|--|---|
| Well Operator: <u>EQT Production Company</u> | Address: <u>115 Professional Place PO Box 280</u> |
| Telephone: <u>304-848-0076</u>               | <u>Bridgeport WV 26330</u>                        |
| Email: <u>vroark@eqt.com</u>                 | Facsimile: <u>304-848-0041</u>                    |

**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](mailto:depprivacyofficer@wv.gov).



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

**June 22, 2016**

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

Subject: DOH Permit for the RVS 14 Pad Site, Monongalia County

|                 |                       |                 |
|-----------------|-----------------------|-----------------|
| 516188 RVS14H1  | 516189 RVS14H2        | 516190 RVS14H3  |
| 516191 RVS14H4  | 516192 RVS14H5        | 516193 RVS14H6  |
| 516194 RVS14H7  | <b>516195 RVS14H8</b> | 516196 RVS14H9  |
| 516197 RVS14H10 | 516198 RVS14H11       | 516199 RVS14H12 |

Dear Mr. Martin,

This well site will be accessed from Permit #04-2016-0482 issued to EQT Production Company for access to the State Road. The well site is located off of Monongalia County Route 26 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, P.E.  
Regional Maintenance Engineer  
Central Office O&G Coordinator

Environmental Protection  
Department of  
WV Department of  
Environmental Protection

Office of Oil and Gas  
Office of Oil and Gas  
Office of Oil and Gas

Cc: Nick Bumgardner  
EQT Production Company  
CH, OM, D-4, File

1706101783

06/02/2017

**Anticipated Frac Additives**  
**Chemical Names and CAS numbers**

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

RECEIVED  
Office of Oil and Gas  
DEC 14 2016  
WV Department of  
Environmental Protection

4706101705

06/02/2017



**PROJECT INFORMATION**

PROJECT NAME: EQT RVS 14  
 TAX PARCEL:  
 GRANT DISTRICT, MONONGALIA COUNTY, WV  
 DISTRICT 7 MAP 17 PARCEL 57  
 SURFACE OWNER:  
 GORDON WAYNE & SHEILA M LAWSON  
 PID 7-17-57  
 TOTAL PROPERTY AREA: 72.02 ACRES  
 TOTAL DISTURBED AREA: 25.60 ACRES



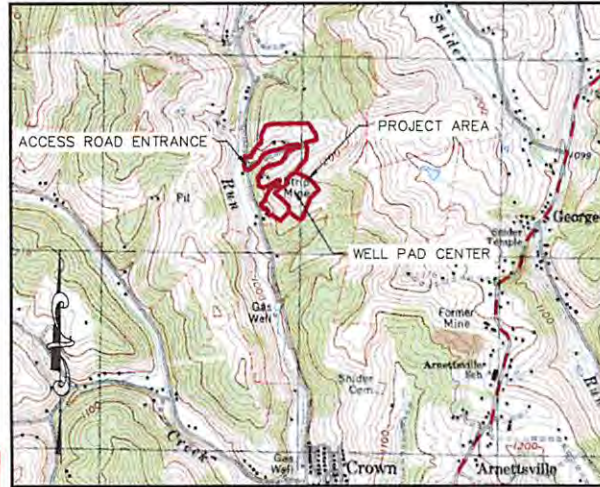
**OPERATOR**  
 EQT PRODUCTION COMPANY  
 OPERATOR ID: 306686  
 P.O. BOX 280  
 BRIDGEPORT, WV 26630  
 PHONE: (304) 348-3870

**ENGINEER**  
 LARSON DESIGN GROUP  
 2502 CRANBERRY SQUARE  
 MORGANTOWN, WV 26508  
 PHONE: (304) 777-2940

**APPROVED WVDEP OOG**  
 5/23/2017

# EQT RVS 14 SITE PLAN

## EQT PRODUCTION COMPANY



SCALE: 1" = 2000'

RIVESVILLE QUADRANGLE  
 WEST VIRGINIA

| PROPOSED WELL NAME | WV NORTH NAD 83             | NAD 83 LAT & LONG               |
|--------------------|-----------------------------|---------------------------------|
| 516188             | N 399819.30<br>E 1798455.57 | LAT 39.596147<br>LON -80.103449 |
| 516189             | N 399828.01<br>E 1798443.97 | LAT 39.596173<br>LON -80.103490 |
| 516190             | N 399838.32<br>E 1798432.37 | LAT 39.595199<br>LON -80.103532 |
| 516191             | N 399847.83<br>E 1798420.77 | LAT 39.596225<br>LON -80.103573 |
| 516192             | N 399857.35<br>E 1798409.16 | LAT 39.596251<br>LON -80.103614 |
| 516193             | N 399866.86<br>E 1798397.59 | LAT 39.596277<br>LON -80.103656 |
| 516194             | N 399848.41<br>E 1798372.75 | LAT 39.596226<br>LON -80.103743 |
| 516195             | N 399838.90<br>E 1798364.35 | LAT 39.596205<br>LON -80.103792 |
| 516196             | N 399829.39<br>E 1798350.96 | LAT 39.596174<br>LON -80.103861 |
| 516197             | N 399819.88<br>E 1798407.53 | LAT 39.596146<br>LON -80.103619 |
| 516198             | N 399810.36<br>E 1798419.13 | LAT 39.596122<br>LON -80.103578 |
| 516199             | N 399800.85<br>E 1798430.74 | LAT 39.595096<br>LON -80.103536 |
| WELL PAD ELEVATION | 1157.00                     |                                 |

**LOCATION COORDINATES**

ACCESS ROAD ENTRANCE  
 LATITUDE: 39.597378 LONGITUDE: -80.106480 (NAD 83)  
 N 400273.37 E 1797604.29 (WV NORTH NAD 83)

CENTER OF WELL PAD  
 LATITUDE: 39.596157 LONGITUDE: -80.103550 (NAD 83)  
 N 399823.17 E 1798427.16 (WV NORTH NAD 83)

CENTER OF FRESH WATER AST PAD  
 LATITUDE: 39.598605 LONGITUDE: -80.104818 (NAD 83)  
 N 400717.10 E 1798075.64 (WV NORTH NAD 83)

CENTER OF IMPAIRED WATER AST PAD  
 LATITUDE: 39.595470 LONGITUDE: -80.104599 (NAD 83)  
 N 399574.92 E 1798129.79 (WV NORTH NAD 83)

**SITE DISTURBANCE COMPUTATIONS**

WELL PAD LIMIT OF DISTURBANCE = 6.75 AC  
 FRESH WATER AST PAD LIMIT OF DISTURBANCE = 2.84 AC  
 IMPAIRED WATER AST PAD LIMIT OF DISTURBANCE = 2.35 AC  
 WELL PAD ACCESS ROAD LIMIT OF DISTURBANCE = 12.59 AC  
 AST PAD ACCESS ROAD LIMIT OF DISTURBANCE = 1.07 AC  
 TOTAL SITE DISTURBANCE = 25.60 AC

**ENTRANCE PERMIT**

EQT WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MV-109) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

**ENVIRONMENTAL NOTES**

WETLAND DELINEATIONS WERE PERFORMED BETWEEN APRIL 26 AND MAY 2, 2016 BY LARSON DESIGN GROUP TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE MAY 5, 2016 EQT RVS 14 JURISDICTIONAL STREAMS & WETLANDS MAPS WERE PREPARED BY LARSON DESIGN GROUP AND SUMMARIZE THE RESULTS OF THE FIELD DELINEATION. THE MAPS DO NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

**GEOTECHNICAL NOTE**

A GEOTECHNICAL INVESTIGATION HAS NOT BEEN COMPLETED FOR THIS SITE DESIGN. CONSEQUENTLY, THE DESIGN OF THE SITE IMPROVEMENTS DEPICTED ON THESE DRAWINGS WAS PREPARED BY LDG WITHOUT DETAILED GEOTECHNICAL INFORMATION AND LDG DOES NOT GUARANTEE THE EFFICACY OF THE DESIGN.

ALTHOUGH A DETAILED GEOTECHNICAL INVESTIGATION WAS COMPLETED BY LARSON DESIGN GROUP ON JUNE 18 AND 19, 2015 AND A REPORT WAS PREPARED ON JULY 22, 2015. CHANGES TO THE SITE DESIGN NECESSITATE THE COMPLETION OF ADDITIONAL GEOTECHNICAL BORINGS AND PREPARATION OF A REVISED GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION. THE OWNER ASSUMES ALL RISK IN THE USE OF THESE DRAWINGS TO CONSTRUCTION IMPROVEMENTS ON THIS SITE.

**SOURCE OF MAPPING DATA**

THE CONTOURS DEPICTED IN THE PLANS WERE COMPILED TO NATIONAL MAP ACCURACY STANDARDS BY KUCERA INTERNATIONAL INC., WILLOUGHBY, OHIO, USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY TAKEN ON APRIL 7, 2014. CONTOURS WHICH ARE IN WOODED OR DENSE VEGETATION ARE APPROXIMATIONS ONLY. THE PROPERTY BOUNDARIES SHOWN IN THE PLANS WERE LOCATED BY LARSON DESIGN GROUP.

**GENERAL DESCRIPTION**

THE ACCESS ROAD(S), WELL PAD, AND AST PADS ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL SHALE GAS WELLS.

**MISS UTILITY STATEMENT**

EQT WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #1611044612 IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

**SHEET INDEX**

- 1 COVER SHEET
- 2-3 GENERAL NOTES
- 4 OVERALL PLAN SHEET INDEX
- 5-6 SITE LAYOUT
- 7 ACCESS ROAD PROFILES
- 8-10 WELL PAD ACCESS ROAD CROSS SECTIONS
- 11 IMPAIRED WATER AST PAD ACCESS ROAD CROSS SECTIONS
- 12 WELL PAD CROSS SECTIONS
- 13 IMPAIRED & FRESH WATER AST PADS CROSS SECTIONS
- 14 EXCESS MATERIAL PILE 2 CROSS SECTIONS
- 15 EXCESS MATERIAL PILE 1 & TOPSOIL PILE 1 CROSS SECTIONS
- 16-17 RECLAMATION PLAN
- 18-28 CONSTRUCTION DETAILS
- 29 CONSTRUCTION QUANTITIES

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!

**RESTRICTIONS NOTES**

- 1. THERE ARE NO PERENNIAL STREAMS, WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD LOD.
- 2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
- 3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
- 4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
- 5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
- 6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.

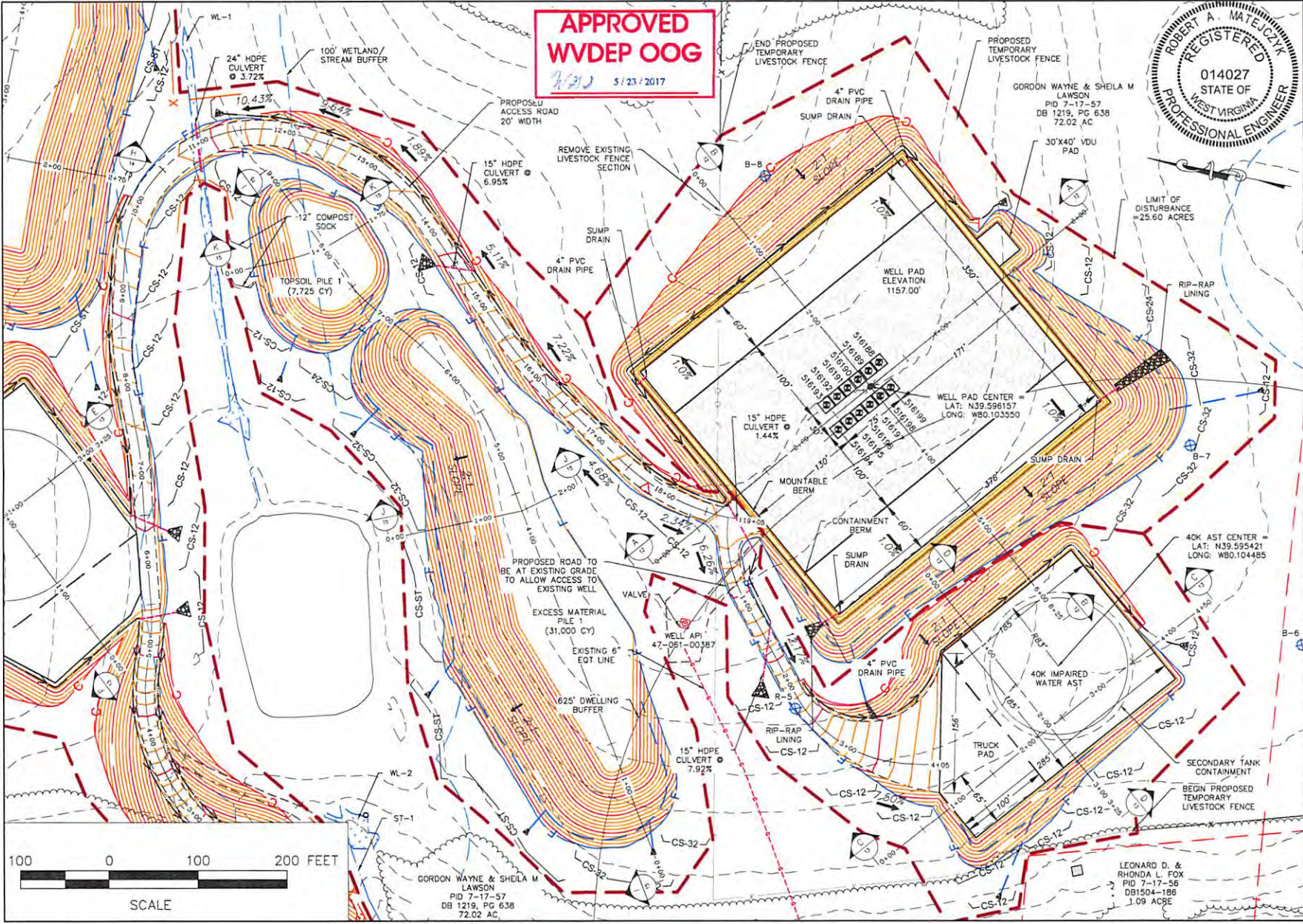


Larson Design Group

| NO. | DATE      | DESCRIPTION                | ISSUE / REVISIONS |
|-----|-----------|----------------------------|-------------------|
| 1   | 1/17/2017 | ISSUE                      |                   |
| 2   | 1/23/2017 | FINAL SITE DESIGN          |                   |
| 3   | 1/23/2017 | FINAL CONSTRUCTION DESIGN  |                   |
| 4   | 1/23/2017 | FINAL DRAFT FOR REVIEW     |                   |
| 5   | 1/23/2017 | RVS 14 UPDATED SITE LAYOUT |                   |
| 6   | 1/23/2017 | COMMENTS                   |                   |

**COVER SHEET**  
**EQT RVS 14 WELL SITE**  
 GRANT DISTRICT, MONONGALIA COUNTY, WEST VIRGINIA  
 Larson Design Group - Architects Engineers Surveyors  
 2502 Cranberry Square  
 Morgantown, WV 26508  
 PHONE 304.777.9940 TOLL FREE 877.323.6603  
 FAX 510.523.9902 • www.larsondesigngroup.com

**EQT Corporation**  
 115 PROFESSIONAL PL  
 BRIDGEPORT, WV 26330  
 PHONE 304.848.0000



**APPROVED WVDEP OOG**  
5/23/2017

ROBERT A. MATEJCYK  
 REGISTERED  
 014027  
 STATE OF  
 WEST VIRGINIA  
 PROFESSIONAL ENGINEER



| NO. | DATE      | ISSUE / REVISIONS          |
|-----|-----------|----------------------------|
| 5   | 1/19/2017 | WVDEP COMMENT RESPONSE     |
| 4   | 1/12/2017 | FINAL SITE DESIGN          |
| 3   | 1/16/2016 | FINAL COMMENTS             |
| 2   | 1/16/2016 | FINAL DRAFT FOR REVIEW     |
| 1   | 1/16/2016 | FINAL DRAFT FOR REVIEW     |
| 0   | 1/14/2016 | RVS 14 UPDATED SITE LAYOUT |
| NO. | DATE      | COMMENTS                   |

**SITE LAYOUT**  
**EOT RVS 14 WELL SITE**  
 GRANT DISTRICT, MONONGALIA COUNTY, WEST VIRGINIA  
 Larson Design Group • Architects Engineers Surveyors  
 2502 Cumberland Station  
 Morgantown, WV 26508  
 PHONE 304.777.2940 • TOLL FREE 877.323.6603  
 FAX 304.323.9902 • www.larsondesigngroup.com

**EOT Corporation**  
 115 PROFESSIONAL PL  
 BRIDGEPORT, WV 26330  
 PHONE 304.848.0000

SHEET NO.: **6 OF 29**  
 PROJECT NO.: 7936-004

100 0 100 200 FEET  
 SCALE

GORDON WAYNE & SHEILA M  
 LAWSON  
 PID 7-17-57  
 DB 1219, PG 638  
 72.02 AC

LEONARD D. &  
 RHONDA L. FOX  
 PID 7-17-56  
 DB1504-186  
 1.09 ACSE