**west virginia** department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

July 02, 2015

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-10303079, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 514500
Farm Name: CONSOLIDATION COAL COMPA
**API Well Number: 47-10303079**
**Permit Type: Horizontal 6A Well**
Date Issued: 07/02/2015

**Promoting a healthy environment.**

API Number: _____

# PERMIT CONDITIONS 47 10 3 0 3 0 7 9

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

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

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

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

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

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

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

9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 6B
(9/13)

4710303079

**STATE OF WEST VIRGINIA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**
**W.VA. CODE §22-6A - WELL WORK PERMIT APPLICATION**

1) Well Operator: EQT Production Company

| 306686 | 103 | 4 | 655 |
|---|---|---|---|
| Operator ID | County | District | Quadrangle |

2) Operator's Well Number: 514500 Well Pad Name FOL109

3) Farm Name/Surface Owner : Consolidation Coal Co Public Road Access: County Route 32

4) Elevation, current ground: 1,503.0 Elevation, proposed post-construction: 1,460.0

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

Other _____

(b) If Gas: Shallow • Deep _____

Horizontal •

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6) Existing Pad? Yes or No: no

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

Target formation is Marcellus at a depth of 7805 with the anticipated thickness to be 52 feet and anticipated target pressure of 2620 PSI

8) Proposed Total Vertical Depth: 7805
9) Formation at Total Vertical Depth: Marcellus
10) Proposed Total Measured Depth: 12,629
11) Proposed Horizontal Leg Length 3,859
12) Approximate Fresh Water Strata Depths: n/a
13) Method to Determine Fresh Water Depth: By offset wells
14) Approximate Saltwater Depths: n/a
15) Approximate Coal Seam Depths: 806, 891, 941, 1077, 1237, 1317, 1346
16) Approximate Depth to Possible Void (coal mine, karst, other): None reported
17)Does proposed well location contain coal seams directly overlying or adjacent to an active mine?
(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____



GCG 7/1/15

WW - 6B
(3/13)

4710303079

## CASING AND TUBING PROGRAM

18)

| TYPE | Size | New or Used | Grade | Weight per ft. | FOOTAGE: for Drilling | INTERVALS: Left in Well | CEMENT: Fill- up (Cu.Ft.) |
|---|---|---|---|---|---|---|---|
| Conductor | 26 | New | MC-50 | 77 | 40 | 40 | 49 C.T.S. |
| Fresh Water | 13 3/8 | New | J-55 | 54.5 | 1,383 | 1,383 | 1,221 C.T.S. |
| Coal | – | – | – | – | – | – | – |
| Intermediate | 9 5/8 | New | A-500 | 40 | 3,530 | 3,530 | 1,367 C.T.S. |
| Production | 5 1/2 | New | P-110 | 20 | 12,629 | 12,629 | See Note 1 |
| Tubing | 2 3/8 | | J-55 | 4.6 | | | May not be run, if run will be set 100' less than TD |
| Liners | | | | | | | |

| TYPE | Size | Wellbore Diameter | Wall Thickness | Burst Pressure | Cement Type | Cement Yield (cu. ft./k) |
|---|---|---|---|---|---|---|
| Conductor | 26 | 30 | 0.312 | - | Construction | 1.18 |
| Fresh Water | 13 3/8 | 17 1/2 | 0.38 | 2,730 | * See Note 2 | 1.21 |
| Coal | | | | | | |
| Intermediate | 9 5/8 | 12 3/8 | 0.395 | 3,950 | * See Note 2 | 1.21 |
| Production | 5 1/2 | 8 1/2 | 0.361 | 12,640 | - | 1.27/1.86 |
| Tubing | | | | | | |
| Liners | | | | | | |

### Packers

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

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

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4710303079

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

Drill and complete a new horizontal well in the Marcellus formation. The vertical drill to go down to an approximate depth of 4921 then kick off the horizontal leg into the Marcellus using a slick water frac.

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

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to average approximately 8500 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 71.14

22) Area to be disturbed for well pad only, less access road (acres): 37.14

23) Describe centralizer placement for each casing string.

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One spaced every 1000' from KOP to Int csg shoe

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

**Surface (Type 1 Cement):** 0-3% Calcium Chloride Used to speed the setting of cement slurries. 0.4% flake. Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.

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

Production:

**Lead (Type 1 Cement):** 0.2-0.7% Lignosulfonate (Retarder). Lengthens thickening time. 0.3% CFR (dispersant). Makes cement easier to mix.

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

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25) Proposed borehole conditioning procedures.

**Surface:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. To ensure that there is no fill, short trip two stands with no circulation. If there is fill, bring compressors back on and circulate hole clean. A constant rate of higher than expected cuttings volume likely indicates washouts that will not clean up.

**Intermediate:** Circulate hole clean (Approximately 30-45 minutes) rotating & reciprocating one full joint until cuttings diminish at surface. When cuttings returning to surface diminish, continue to circulate an additional 5 minutes. If foam drilling, to enhance hole cleaning use a soap sweep or increase injection rate & foam concentration.

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

*Note: Attach additional sheets as needed.

GCS 7/1/15

4710303079

# Well Schematic
## EQT Production

| | |
|---|---|
| Well Name | [redacted] |
| County | [redacted] |
| State | West Virgina |
| Elevation KB: | [redacted] |
| Target | [redacted] |
| Prospect | [redacted] |
| Azimuth | [redacted] |
| Vertical Section | [redacted] |

0'

500'

NA Fresh Water Base

1,000'

1,500'

2,000'

2,500'

2,568' Big Lime

2,935' Weir
3,136' -Gantz
3,256' -Fifty foot
3,335' -Thirty foot
3,362' Base Red Rock
3,423' -Gordon
3,444' -Forth Sand
3,560' -Bayard
3,530' Int. csg pt

3,000'

3,500'

4,000'

4,077' -Warren
4,223' -Speechley
4,298' -Balltown A

4,500'

5,000'

5,095' -Riley

5,500'

5,721' -Benson

6,000'

6,093' -Alexander

6,500'

7,000'

7,340' -Sonyea
7,589' -Middlesex
7,553' -Genesee
7,642' -Geneseo
7,670' -Tully
7,692' -Hamilton
7,786' -Marcellus
7,837' Onondaga

7,500'

8,000'

0'

Hole Size 30" - 26" Conductor at 40'
Bit Size 17.5"

500'

1,000'

1,500'

TOC @ Surface
13 3/8", MC-50, 54.5# @ [redacted] ft MD
Bit Size 12.375"

2,000'

2,500'

3,000'

3,500'

TOC @ [redacted]
9 5/8", MC-50, 40# @ [redacted] ft MD
Bit Size 8.5"

4,000'

4,500'

5,000'

KOP = [redacted] ft MD
10 Deg DLS

5,500'

6,000'

6,500'

7,000'

7,500'

Land @ [redacted] ft MD
[redacted] ft TVD

5 1/2", P-110, 20# [redacted] ft MD
[redacted] ft TVD

8,000'

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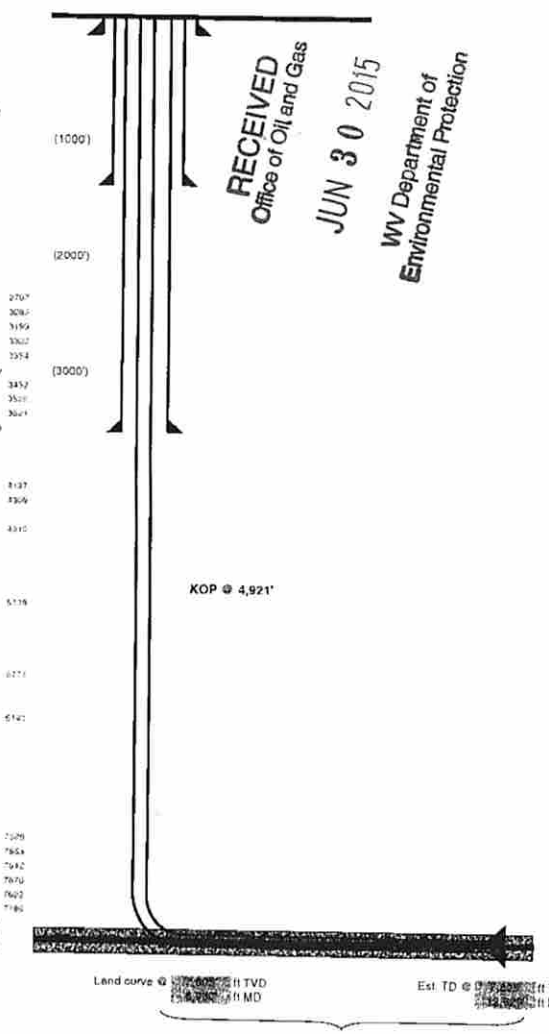
**Well 514500 (FOL109H6)**
**EQT Production**
[redacted] **West Virgina**

Azimuth [redacted]
Vertical Section [redacted]

| TVD Depth (feet) | Formation Tops (TVD) | | |
|---|---|---|---|
| 0' | | | |
| 250' | | | |
| 500' | | | |
| 750' | Base Fresh Water | NA | |
| 1,000' | | | (1000') |
| 1,250' | | | |
| 1,500' | | | |
| 1,750' | | | |
| 2,000' | | | (2000') |
| 2,250' | | | |
| 2,500' | Big Lime | 2568 | 2707 |
| | Weir | 2935 | 3082 |
| 2,750' | Gantz | 3138 | 3159 |
| | Fifty foot | 3256 | 3302 |
| 3,000' | Thirty foot | 3335 | 3354 |
| | Rose Red Rock | 3362 | (3000') |
| 3,250' | Gordon | 3427 | 3452 |
| | Forth Sand | 3443 | 3520 |
| 3,500' | Bayard | 3503 | 3621 |
| | Fifty foot | 3529 | |
| 3,750' | | | |
| 4,000' | Warren | 4377 | 4137 |
| | Speechley | 4223 | 4309 |
| 4,250' | | | |
| 4,500' | Balltown A | 4258 | 4310 |
| 4,750' | | | |
| 5,000' | Riley | 5065 | 5119 |
| 5,250' | | | |
| 5,500' | | | |
| 5,750' | Benson | 5721 | 5771 |
| 6,000' | Alexander | 6061 | 6141 |
| 6,250' | | | |
| 6,500' | | | |
| 6,750' | | | |
| 7,000' | Sonyea | 7336 | 7329 |
| | Middlesex | 7589 | 7654 |
| 7,250' | Genesee | 7653 | 7692 |
| | Genesee | 7642 | 7670 |
| 7,500' | Tully | 7670 | 7692 |
| | Hamilton | 7692 | 7786 |
| 7,750' | Marcellus top | 7786 | |
| | **Target Inside Marcellus** | **7805** | |
| 8,000' | Marcellus Bottom | 7857 | |
| 8,250' | | | |




| Hole Size | Casing Type | Size (inches) | Wt (ppf)/Grade |
|---|---|---|---|
| 30 | Conductor | 26 | 77#/MC-50 |
| [illegible] | Surface | 13 3/8 | 54.5#/J-55 |
| [illegible] | Intermediate | 9 5/8 | 40#/A-500 |
| [illegible] | Production Casing | 5 1/2 | 20#/P-110 |

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EQT

June 25, 2015

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Environmental Protection

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 (FOL109)

Dear Mr. Smith,

EQT is requesting the 13 3/8" surface casing to be set at 1383' KB. 30' below the base of Pittsburgh Coal. We will set the 9-5/8" intermediate string at 3530' KB, below the offset production in the Gordon formation.

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

Sincerely,

Vicki Roark
Permitting Supervisor-WV

Enc.

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

47-103-03079

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 by GCS

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

47 10 3 0 3 0 7 9

**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.

47-103-03079

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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WW-9
(5/13)

Page ____ of ____

API No. 47 - 103 - 0
Operator's Well No. 514500

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

Fluids/Cuttings Disposal & Reclamation Plan

Operator Name EQT Production Co. OP Code 306686

Watershed (HUC10) Sams Run of Fishing Creek Quadrangle Wallace

Elevation 1460.0 County Wetzel District Grant

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

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

If so please describe anticipated pit waste: ___

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air is used to drill the top-hole sections of the wellbore, Surface, Intermediate, and Pilot hole sections, water based mud is used to drill the curve and lateral.

If oil based, what type? Synthetic, petroleum, etc ___

Additives to be used in drilling medium? MILBAR, Viscosifer, Alkalinity Control, Lime, Chloride Salts,Rate Filtration Control, Deflocculant, Lubricant, Detergent, Defoaming, Walnut Shell, X-Cide, SOLTEX Terra. Of the listed chemicals the following are generally used when drilling on air: lubricant, detergent, defoaming. Water based fluids use the following chemicals: MILBAR, viscosifer, alkalinity control, lime, chloride salts, rate filtration control, deflocculant, lubricant, detergent, defoaming, walnut shell, x-cide, SOLTEX terra

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

DMH
2-10-15

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.

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FEB 17 2015
WV Department of Environmental Protection

Company Official Signature ___
Company Official (Typed Name) Victoria J. Roark
Company Official Title Permitting Supervisor

Subscribed and sworn before me this 6 day of Feb, 20 15

___ Notary Public

My commission expires 8-24-22

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

WW-9

Operator's Well No. 514500

Proposed Revegetation Treatment: Acres Disturbed 71.14 Prevegetation pH 6.1

Lime 3 Tons/acre or to correct to pH 6.5

Fertilize type Granular 10-20-20

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

Mulch 2 Tons/acre

Seed Mixtures

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

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [illegible]

Comments:

Title: Oil & Gas Inspector Date: 2-10-15

Field Reviewed? ( ✓ ) Yes ( ) No

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4710303079

Where energy meets innovation.℠

# Site Specific Safety Plan

## EQT FOL 109 Pad

## Folsom
## Wetzel County, WV

For Wells:

| | | | | | | |
|---|---|---|---|---|---|---|
| 514495 | 514496 | 514497 | 514498 | 514499 | 514500 | 514553 |
| 514554 | 514555 | 515487 | 515488 | 515489 | 515490 | 515492 |
| | | | | | | |

Date Prepared: **December 16, 2014**

EQT Production

Permitting Supervisor
Title

2-6-15
Date

WV Oil and Gas Inspector

Title

Date

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EQT

# Water Source Identification

4710303079

EQT Well Pad Name: Folsom 109 Submittal Date: December 15, 2014

EQT Well Number: _____

Survey / Engineering Company: Allegheny Surveys, Inc.

---

Site Number: 1 Distance from Gas Well (feet): 1768

Surface Owner / Occupant: Consolidation Coal Company

Address: 1000 Consol Energy Dr., Canonsburg, PA 15317 Phone #: _____

Field Located Date: November 26, 2014 Owner home during survey (yes/no): No

Coordinates: 39.478756, -80.498832 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: This is a pond, location near an abandoned house and barns

---

Site Number: 2 Distance from Gas Well (feet): 2393

Surface Owner / Occupant: Consolidation Coal Company

Address: 1000 Consol Energy Dr., Canonsburg, PA 15317 Phone #: _____

Field Located Date: November 26, 2014 Owner home during survey (yes/no): No

Coordinates: 39.477754, -80.485558 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: This is a pond.

---

Site Number: 3 Distance from Gas Well (feet): 681

Surface Owner / Occupant: Consolidation Coal Company

Address: 1000 Consol Energy Dr., Canonsburg, PA 15317 Phone #: _____

Field Located Date: _____ Owner home during survey (yes/no): No

Coordinates: 39.478739, -80.493995 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: Spring #4 as identified by Potesta

---

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4710303079

Site Number: 4 Distance from Gas Well (feet): 876

Surface Owner / Occupant: Consolidation Coal Company

Address: 1000 Consol Energy Dr., Canonsburg, PA 15317 Phone #: _____

Field Located Date: _____ Owner home during survey (yes/no): No

Coordinates: 39.481820, -80.496134 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: Spring #6 as identified by Potesta

---

Site Number: 5 Distance from Gas Well (feet): 1651

Surface Owner / Occupant: Coastal Lumber Company-Coastal Forest Resources Co.

Address: PO Box 709, Buckhannon, WV 26201 Phone #: _____

Field Located Date: _____ Owner home during survey (yes/no): No

Coordinates: 39.485096, -80.493256 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: Spring #1 as identified by Potesta.

---

Site Number: 6 Distance from Gas Well (feet): 2054

Surface Owner / Occupant: Coastal Lumber Company-Coastal Forest Resources Co.

Address: PO Box 709, Buckhannon, WV 26201 Phone #: _____

Field Located Date: _____ Owner home during survey (yes/no): No

Coordinates: 39.485941, -80.495689 (decimal degrees – NAD 83)

Contact Attempts (Date): 1st: _____ 2nd: _____ 3rd: _____ Date Door Hanger Left: _____

Comments: Vernal Pool as identified by Potesta

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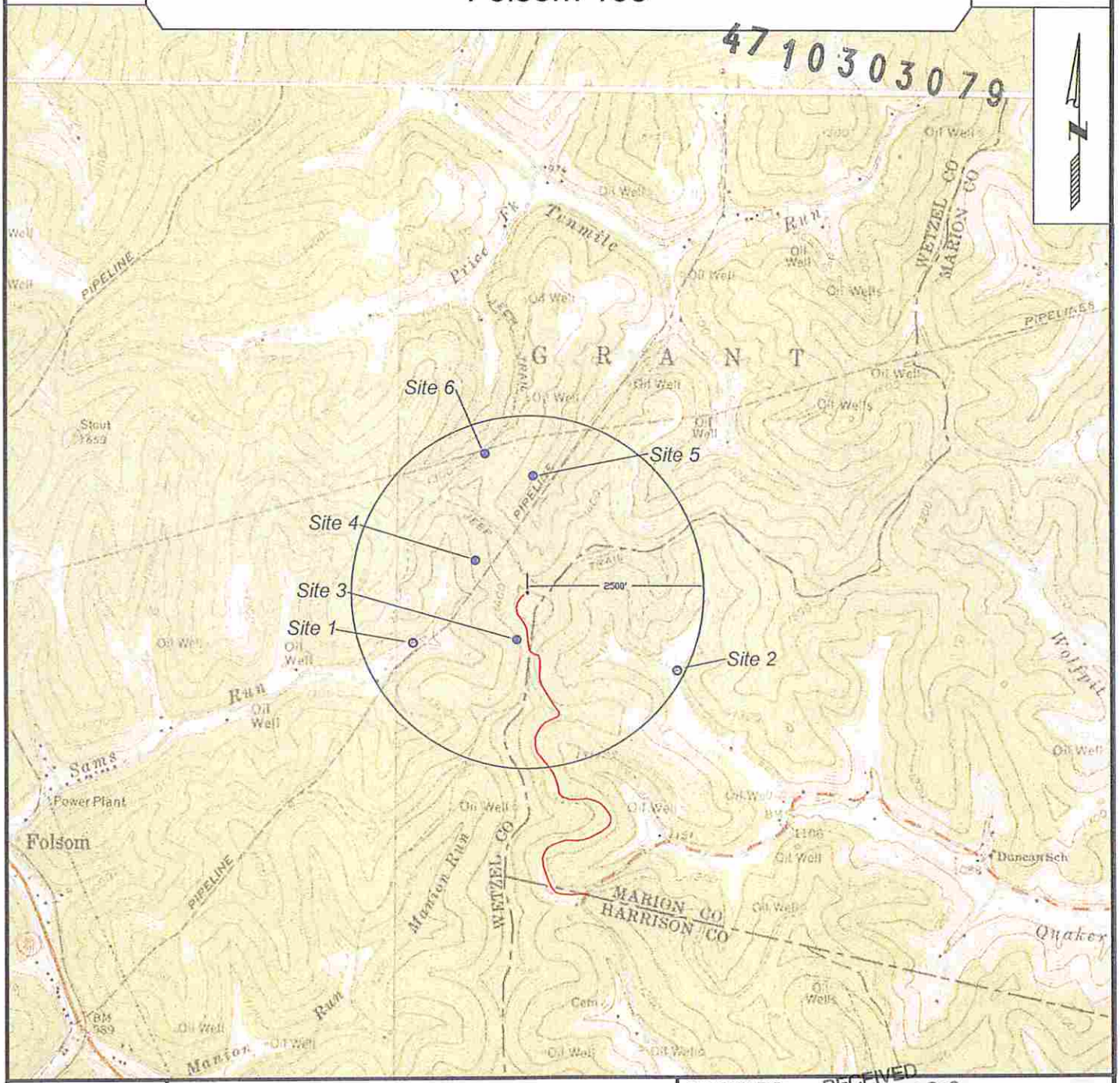
(Insert additional pages as needed)

| | | | |
|---|---|---|---|
| Topo Quad: | Wallace 7.5' | Scale: | 1 " = 2000' |
| County: | Wetzel | Date: | November 25, 2014 |
| District: | Grant | Project No: | 165-34-00-13 |

Water

# Folsom 109




SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

1-800-482-8606
237 Birch River Road
Birch River, WV 26610
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**
P.O. Box 280
Bridgeport, WV 26330

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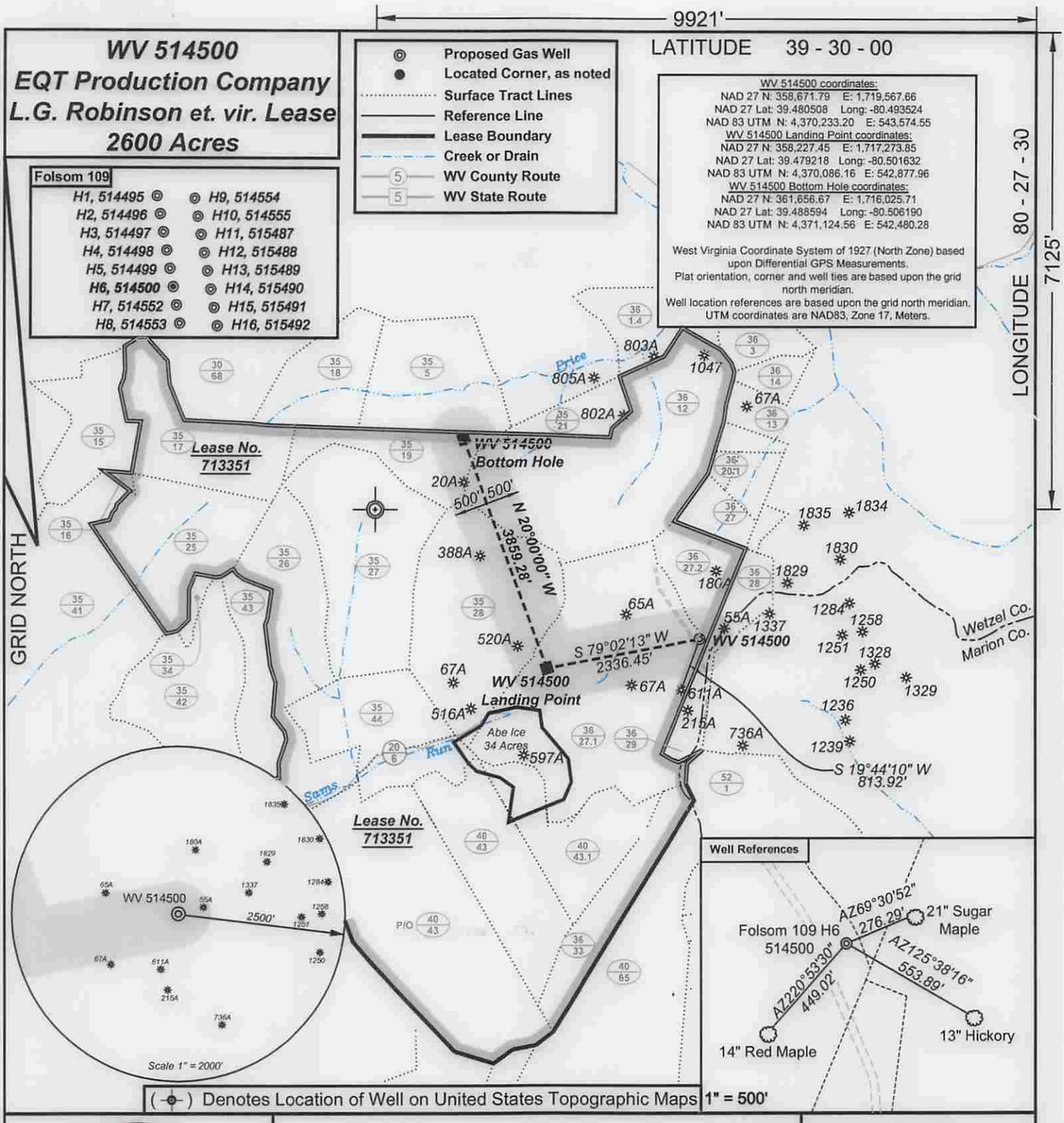


*I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.*

Ben R. Singleton

P.S. 2092

Ben R. Singleton LICENSED NO. 2092 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

SEAL

FILE NO: 165-13
DRAWING NO: Folsom 109 H6
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: February 2 20 15
OPERATOR'S WELL NO. 514500
API WELL NO H6A
47 - 103 - 03079
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION : ☐ STORAGE ☐ DEEP ☒ SHALLOW
LOCATION: ELEVATION: Original 1503 Proposed 1460 WATERSHED Sams Run of Fishing Creek QUADRANGLE: Wallace
DISTRICT: Grant COUNTY: Wetzel
SURFACE OWNER: Consolidation Coal Company ACREAGE: 175
ROYALTY OWNER: Ed Broome, Inc. et. al. LEASE NO: 713351 ACREAGE: 2600
PROPOSED WORK: ☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION
☐ PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: TVD 7828

WELL OPERATOR: EQT Production Company
ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330

DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330

WW-6A1
(5/13)

Operator's Well No. 514500

**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 –

4710303079

(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 Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|---|---|---|---|---|
| 713351 | | | 1/8 Min Pd | |
| | L.G. Robionson & J.S. Robinson | J.E. Carhahan | | DB 73/266 |
| | J.E. Carhahan | Carnegie Natural Gas Company | | LB 22/313 Doddridge |
| | Carnegie Natural Gas Company | Carnegie Production Company | | LB 78A/513 |
| | Carnegie Production Company (USX) | Equitable Resources, Inc. | | Unrecorded Purchase & Sale Agreement |
| | Equitable Resources, Inc. | EQT Production Company, a subsidiary of EQT Corporation | | CB 13/230 |

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

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

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

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

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

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

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47 1030307 9

# PURCHASE AND SALE AGREEMENT

PURCHASE AND SALE AGREEMENT, dated as of May 27, 1999 (this "Agreement"), by and between USX CORPORATION, a Delaware corporation, ("USX") and EQUITABLE RESOURCES, INC., a Pennsylvania corporation (hereinafter referred to as "Buyer").

WHEREAS, USX owns directly or indirectly all of the outstanding capital stock or other evidence of an equity interest of the following companies (each a "Carnegie Company" and collectively the "Carnegie Companies"), which are involved in one or more of the production, gathering, transportation, treatment, distribution and sale of natural gas: (i) Carnegie Natural Gas Company, a Pennsylvania corporation, ("Carnegie"), (ii) Carnegie Interstate Pipeline Company, a Delaware corporation, ("CIPCO"), (iii) Carnegie Production Company, a Pennsylvania corporation, ("CPC"), (iv) Carnegie Natural Gas Sales, Inc., a Delaware corporation, ("CNGS") and (v) Carnegie Gas Storage, LLC, a Delaware limited liability company, ("CGS"); and

WHEREAS, USX desires to sell to Buyer and Buyer desires either for itself and/or one or more designated subsidiaries to purchase from USX one hundred percent (100%) of the capital stock and other evidence of equity interest in the Carnegie Companies;

NOW, THEREFORE, for and in consideration of the premises and the representations, warranties, covenants and agreements herein set forth and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

## ARTICLE I
## DEFINITIONS

Unless otherwise specifically stated in the text of this Agreement, the following terms shall have the following meanings:

Section 1.1 The "1935 Act" shall mean the Public Utility Holding Company Act of 1935, as amended.

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5.13 No Third-Party Rights. Nothing in this Agreement, expressed or implied, shall or is intended to confer upon any Person other than the parties hereto or their respective successors or assigns.

IN WITNESS WHEREOF, the parties have executed, delivered and entered into this agreement as of the day and year first above written.

USX Corporation

By: _____
Typed Name: V. G. Beghini
Title: Vice Chairman - Marathon Group

Equitable Resources, Inc.

By: _____
Typed Name: David L. Porges
Title: Senior Vice President and Chief Financial Officer

WW-6AC
(1/12)

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

Date of Notice Certification: FEB 06 2015

API No. 47 - 103 - 0
Operator's Well No. 514500
Well Pad Name: FOL109

4710303079

**Notice has been given:**

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

| | | | |
|---|---|---|---|
| State: | WV | UTM NAD 83 Easting: | 4,370,233.00 |
| County: | Wetzel | UTM NAD 83 Northing: | 543,575.00 |
| District: | Grant | Public Road Access: | CO 20/11 |
| Quadrangle: | Wallace | Generally used farm name: | Consolidation Coal Co |
| Watershed: | Sams Run of Fishing Creek | | |

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

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

## Required Attachments:

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

WW-6AC
(1/12)

**Certification of Notice is hereby given:**

THEREFORE, I _____, 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.

4710503079

| | | | |
|---|---|---|---|
| Well Operator: | EQT Production Company | Address: | P.O. Box 280 |
| By: | Victoria J. Roark | | Bridgeport, WV 26330 |
| Its: | Permitting Supervisor | Facsimile: | 304-848-0040 |
| Telephone: | 304-848-0076 | Email: | vroark@eqt.com |

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

Subscribed and sworn before me this 6 day of Feb ,2015

Notary Public

My Commission Expires 8-24-22

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-6A
(9-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 514500
Well Pad Name: FOL109

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

4710303079

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
Date of Notice: FEB 06 2015 Date Permit Application Filed: FEB 06 2015

**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 for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

☑ SURFACE OWNER(s)
Name: Consolidation Coal Co
Address: Engineering and Operations Support Dept - Coal
CNX Center 1000 Consol Energy Dr
Canonsburg, PA 15317
see attached
Name: 0
Address: 0
0
0

☑ SURFACE OWNERS(s) (Road and/or Other Disturbance)
Name: Consolidation Coal Co
Address: Engineering and Operations Support Dept - Coal
CNX Center 1000 Consol Energy Dr
Canonsburg, PA 15317
see attached
Name: 0
Address: 0
0
0

☑ SURFACE OWNER(s) (Impoundments/Pits)
Name: Consolidation Coal Co
Address: Engineering and Operations Support Dept - Coal
CNX Center 1000 Consol Energy Dr
Canonsburg, PA 15317
see attached

☑ COAL OWNER OR LESSEE
Name: Murray American Energy Inc
Address: 1 Bridge Street
Monongah WV 26554
0
See attached for additional coal owners.

☐ COAL OPERATOR
Name: 0
Address: 0
0
0

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Consolidation Coal Co
Address: 1000 Consol Energy Dr
Canonsburg, PA 15317
0

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

*Please attach additional forms if necessary

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4710303079

**Additional Surface Owners:**

Coastal Forest Resources Company
P.O. Box 709
Buckhannon, WV 26201

**Additional Surface Owners: Pits/Impoundments**

Coastal Forest Resources Company
P.O. Box 709
Buckhannon, WV 26201

Tall Timber Inc
4464 Mannington Road
Smithfield, WV 26437

**Additional Surface Owners: Access Road**

Coastal Forest Resources Company
P.O. Box 709
Buckhannon, WV 26201

James W Moore et al
707 Quaker Fork Road
Wallace WV 26448

Tall Timber Inc
4464 Mannington Road
Smithfield, WV 26437

Larry Hood
1007 Sams Run Road
Folsom WV 26348

James Edward Gifford
2145 Big Elk Road
Wallace WV 26448

**Additional Coal Owners**

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

CNX RCPC LLC
CNX Center
1000 Consol Energy Drive
Canonsburg PA 15317

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**Additional Coal Owners**

Consol Mining Company LLC
Engineering and Operations Support Dept - Coal
CNX Center
1000 Consol Energy Drive
Canonsburg PA 15317

State of West Virginia
Property Tax Division
Albert T Summers Center
P.O. Box 2389
Charleston, WV 25301

**CBM Lessee:**

CNX Gas Company LLC
Engineering and Operations Support Dept - Coal
CNX Center
1000 Consol Energy Drive
Canonsburg PA 15317

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WW-6A
(8-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 514500
Well Pad Name: FOL109

**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.

4710303019

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

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

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

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

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

**Well Location Restrictions**

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

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

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**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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Environmental Protection

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.

WW-6A
(8-13)

API NO. 47 - 103 - 0
OPERATOR WELL NO. 514500
Well Pad Name: FOL109

**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.

4710303039

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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Environmental Protection

**Notice is hereby given by:**

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

**Oil and Gas Privacy Notice:**

4710303079

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

By: Victoria Roark
Its: Permitting Supervisor

Subscribed and sworn before n 6 day of Feb, 2015

Notary Public

My Commission Expir 8-24-22

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

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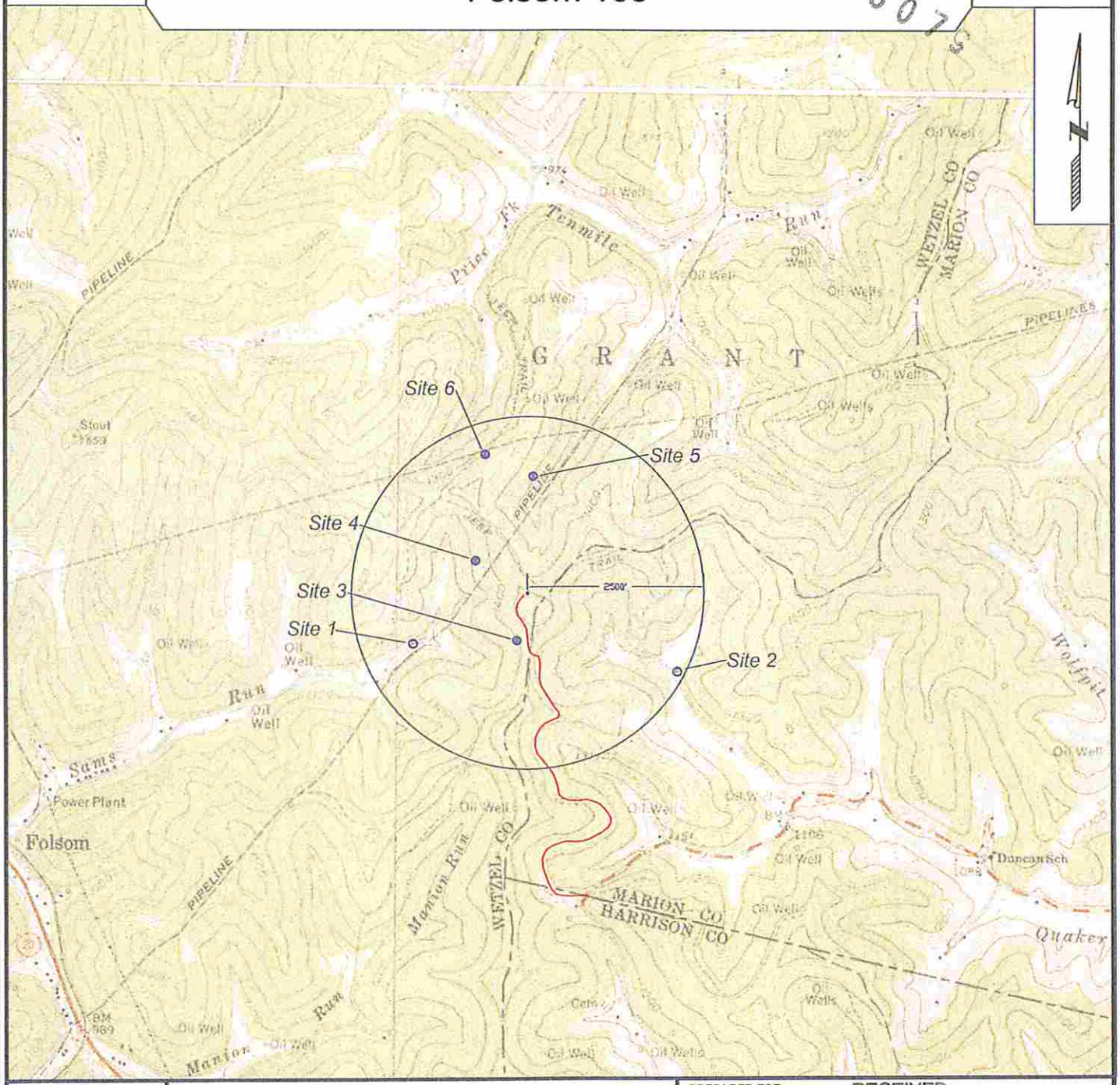
| | | | |
|---|---|---|---|
| Topo Quad: | Wallace 7.5' | Scale: | 1 " = 2000' |
| County: | Wetzel | Date: | November 25, 2014 |
| District: | Grant | Project No: | 47 165-34-00-13 |

Water

# Folsom 109




SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

1-800-482-8606
237 Birch River Road
Birch River, WV 26610
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**
P.O. Box 280
Bridgeport, WV 26330

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WV Department of
Environmental Protection

WW-6A3
(1/12)

Operator Well No. FOL109 Lease 713351

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

4710303079

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

**Date of Notice:** 7/1/2014 **Date of Planned Entry:** 7/8/2014

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

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

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

**Notice is hereby provided to:**

[X] **SURFACE OWNER(S)** and Coal
Name: Consolidation Coal Company
Engineering & Operations Support Dept. Coal
Address: 1000 CONSOL Energy Drive
Canonsburg, PA 15317-6506

[X] **COAL OWNER(S)** Surface & Coal
Name: Murray American Energy Inc.
Troy Freels
Address: 1 Bridge St.
Monongah, WV 26554-1076

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

*Please attach additional forms if necessary

**Notice is hereby given:**

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

| | | | |
|---|---|---|---|
| State: | West Virginia | Approx. Latitude & Longitude: | 39.47413 / -80.50296 |
| County: | Wetzel | Public Road Access: | CR 20/6 |
| Dist/Map/Par: | Grant / Map 40 / Parcel 43, 43.1 | Watershed: | Sams Run |
| Quadrangle: | Folsom | Generally Used Farm Name: | |

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

**Notice is hereby given by:**

| | | | |
|---|---|---|---|
| Well Operator: | EQT Production Company | Address: | 115 Professional Place, Bridgeport, WV 26330 |
| Telephone: | 304-848-0099 | EQT Representative: | Kathy Kugel |
| Facsimile: | 304-848-0040 | Signature: | Kathy Kugel |
| Email: | eqtlandentrynotice@eqt.com | | |

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WV Department of
Environmental Protection

**Oil and Gas Privacy Notice:**
The Office of Oil and Gas processes your personal information, such a name, address and telephone number, as part of regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@WV.gov.

WW-6A3
(1/12)

Operator Well No. FOL109 Lease 713351

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

4710303079

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

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

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

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**Notice is hereby provided to:**

[ ] SURFACE OWNER(S)
Name:
Address:

[ ] COAL OWNER(S) OR LESSEE(S)

[X] MINERAL OWNER(S)
Name: Ed & Douglas Broome
Address: PO Box 186
Glenville, WV 26351

*Please attach additional forms if necessary

**Notice is hereby given:**

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

| | | | |
|---|---|---|---|
| State: | West Virginia | Approx. Latitude & Longitude: | 39.47413 / -80.50296 |
| County: | Wetzel | Public Road Access: | CR 20/6 |
| Dist/Map/Par: | Grant / Map 40 / Parcel 43, 43.1 | Watershed: | Sams Run |
| Quadrangle: | Folsom | Generally Used Farm Name: | |

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

**Notice is hereby given by:**

| | | | |
|---|---|---|---|
| Well Operator: | EQT Production Company | Address: | 115 Professional Place, Bridgeport, WV 26330 |
| Telephone: | 304-848-0099 | EQT Representative: | Kathy Kugel |
| Facsimile: | 304-848-0040 | Signature: | Kathy Kugel |
| Email: | eqtlandentrynotice@eqt.com | | |

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such a name, address and telephone number, as part of 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.

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WW-6A5
(1/12)

Operator Well No. 514500

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

47 103 0 3 0 7 9

**Notice Time Requirement:** notice shall be provided no later than the filing date of permit application.
**Date of Notice:** FEB 06 2015 **Date Permit Application Filed:** FEB 06 2015

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

☑ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

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

**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: Consolidation Coal Co
Address: Engineering and Operations Support Dept - Coal
CNX Center 1000 Consol Energy Dr
Canonsburg PA 15317

Name: James Edward Gifford
Address: 2145 Big Elk Rd
Wallace WV 26448

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

| | | | | |
|---|---|---|---|---|
| State: | WV | UTM NAD 83 | Easting: | 4,370,233.000000 |
| County: | Wetzel | | Northing: | 543,575.000000 |
| District: | Grant | Public Road Access: | | CO 20/11 |
| Quadrangle: | Wallace | Generally used farm name: | | Consolidation Coal Co |
| Watershed: | Sams Run of Fishing Creek | | | |

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


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


**Oil and Gas Privacy Notice:**
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.


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(1/12)

Operator Well No. 47 514500
47 10303079

**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:** FEB 06 2015 **Date Permit Application Filed:** FEB 06 2015

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

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**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: Coastal Forest Resources Co
Address: P.O. Box 709
Buckhannon WV 26201

Name: James W Moore et al
Address: 707 Quaker Fork
Wallace WV 26448

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

| | | | | |
|---|---|---|---|---|
| State: | WV | UTM NAD 83 | Easting: | 4,370,233.000000 |
| County: | Wetzel | | Northing: | 543,575.000000 |
| District: | Grant | Public Road Access: | | CO 20/11 |
| Quadrangle: | Wallace | Generally used farm name: | | Consolidation Coal Co |
| Watershed: | Sams Run of Fishing Creek | | | |

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

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

**Oil and Gas Privacy Notice:**
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Operator Well No. 514500

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

47 10 3 0 3 0 7 9

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

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**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: Tall Timber Inc
Address: 4464 Mannington Road
Smithfield WV 26437

Name: Larry Hood
Address: 1007 Sams Run Road
Folsom WV 26348

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

| | | | | |
|---|---|---|---|---|
| State: | WV | UTM NAD 83 | Easting: | 4,370,233.000000 |
| County: | Wetzel | | Northing: | 543,575.000000 |
| District: | Grant | Public Road Access: | | CO 20/11 |
| Quadrangle: | Wallace | Generally used farm name: | | Consolidation Coal Co |
| Watershed: | Sams Run of Fishing Creek | | | |

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

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WV Department of
Environmental Protection

WW-6AW
(1-12)

API NO. 47-103-03079
OPERATOR WELL NO. 514500 FOL109 H6
Well Pad Name: FOL109

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

# VOLUNTARY STATEMENT OF NO OBJECTION

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

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

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

## VOLUNTARY STATEMENT OF NO OBJECTION

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

| | | | | |
|---|---|---|---|---|
| State: | West Virginia | West Virginia North State Plane NAD 27 | East: | 1,719,568.000 ft |
| County: | Wetzel | | North: | 358,672.000 ft |
| District: | Grant | Public Road Access: | | CO 20/11 |
| Quadrangle: | FOLSOM | Generally used farm name: | | Consolidation Coal Company |
| Watershed: | Sams Run of Fishing Creek | | | |

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, **provided that EQT Production Company drills the well on West Virginia North State Plane NAD 27 coordinates of North 358,672.000 ft, East 1,719,568.000 ft in accordance with the Agreement between Consolidation Coal Company and Murray American Energy, Inc. and EQT Production Company dated 2/2/2015.**

*Please check the box that applies

- ☐ SURFACE OWNER
- ☐ SURFACE OWNER (Road and/or Other Disturbance)
- ☐ SURFACE OWNER (Impoundments/Pits)
- ☒ COAL OWNER OR LESSEE
- ☒ COAL OPERATOR
- ☐ WATER PURVEYOR
- ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD

**FOR EXECUTION BY A NATURAL PERSON**

Signature: _____
Print Name: _____
Date: _____

**FOR EXECUTION BY A CORPORATION, ETC.**

Company: Consolidation Coal Company
By: Alex O'Neill
Its: Coal, Oil & Gas Relations Manager
Signature: _____
Date: 2/2/2015

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Office of Oil and Gas
FEB 09 2015

**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

WV Department of Environmental Protection

4710303079

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

**February 13, 2015**

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

Subject: DOH Permit for the FOL 109 Pad Site, Marion County

| | | |
|---|---|---|
| 514495 FOL109H1 | 514496 FOL109H2 | 514497 FOL109H3 |
| 514498 FOL109H4 | 514499 FOL109H5 | 514500 FOL109H6 |
| 514552 FOL109H7 | 514553 FOL109H8 | 514554 FOL109H9 |
| 514555 FOL109H10 | 515487 FOL109H11 | 515488 FOL109H12 |
| 515489 FOL109H13 | 515490 FOL109H14 | 515491 FOL109H15 |
| 515492 FOL109H16 | | |

Dear Mr. Martin,

This well site will be accessed from Permit #04-2015-0152 applied for by EQT Production Company for access to the State Road. The well site is located off of Marion County Route 32 SLS. The approved DOH permit must be received before construction of or any use of this access to the roadway.

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.

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FEB 17 2015
WV Department of
Environmental Protection

Very Truly Yours,

Gary K. Clayton

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

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

# Anticipated Frac Additives

## Chemical Names and CAS numbers

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

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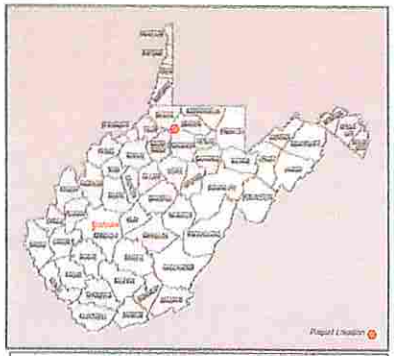
# FOL 109

## FINAL SITE DESIGN, CONSTRUCTION PLANS, & EROSION & SEDIMENT CONTROL PLANS EQT PRODUCTION COMPANY




| FLOODPLAIN CONDITIONS | |
|---|---|
| DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN | NO |
| PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR | NO |
| HEC-RAS STUDY COMPLETED | N/A |
| FLOODPLAIN SHOWN ON DRAWINGS | NO |
| FIRM MAP NUMBER(S) FOR SITE | 5410X0285C & 5404IC0155D |
| ACREAGES OF CONSTRUCTION IN FLOODPLAIN | N/A |

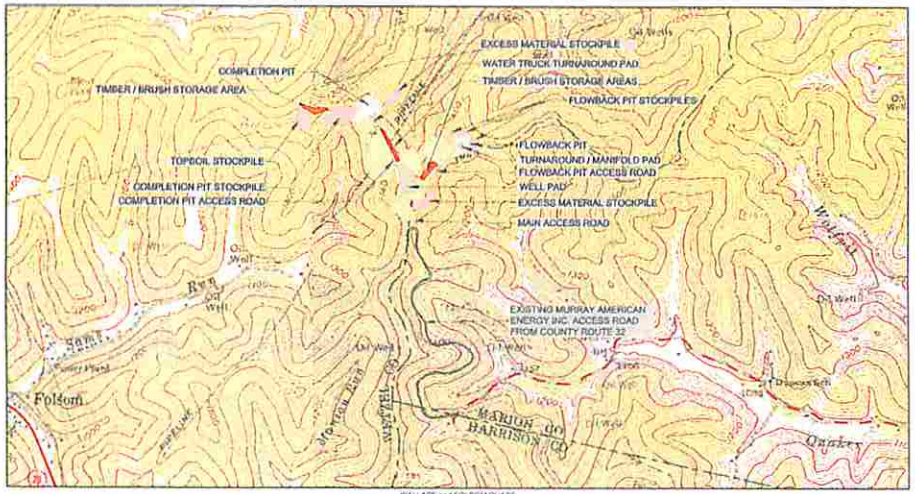
NO WETLANDS ARE IMPACTED OR STREAMS IMPACTED

*PROPOSED WELL LEGEND*

| | | |
|---|---|---|
| H1 | LAT:39.480795 | LONG:-80.493388 |
| H2 | LAT:39.480755 | LONG:-80.493378 |
| H3 | LAT:39.480714 | LONG:-80.493368 |
| H4 | LAT:39.480674 | LONG:-80.493358 |
| H5 | LAT:39.480633 | LONG:-80.493348 |
| H6 | LAT:39.480593 | LONG:-80.493338 |
| H7 | LAT:39.480552 | LONG:-80.493328 |
| H8 | LAT:39.480512 | LONG:-80.493318 |
| H9 | LAT:39.480790 | LONG:-80.493278 |
| H10 | LAT:39.480750 | LONG:-80.493268 |
| H11 | LAT:39.480710 | LONG:-80.493258 |
| H12 | LAT:39.480669 | LONG:-80.493248 |
| H13 | LAT:39.480629 | LONG:-80.493238 |
| H14 | LAT:39.480588 | LONG:-80.493228 |
| H15 | LAT:39.480548 | LONG:-80.493218 |
| H16 | LAT:39.480507 | LONG:-80.493208 |

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

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




WALLACE and FOLSOM QUADS
FISHING CREEK AND TENMILE RUN WATERSHEDS

| SITE LOCATIONS NAD 83 | | |
|---|---|---|
| | LATITUDE | LONGITUDE |
| Center of Well Pad | 39.480633 | -80.493351 |
| Center of Flow Back Pit | 39.481051 | -80.496651 |
| Center of Completion Pit | 39.484113 | -80.493858 |
| Jct. CR30 Main Access | 39.478080 | -80.492518 |
| Murray Access at County Rt. 32 | 39.498823 | -80.490170 |

GRAPHIC SCALE

1 INCH = 1 MILE

*Project Contacts*

*Field Guy EQT Production Company*
*304-848-0085 Off*

*Surveyor & Engineer*

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

*James D. Fields - E.I.T. - Hornor Brothers Engineers*
*304-624-6445 Office*

*Tom Gardners - PE, PS - Hornor Brothers Engineers*
*304-624-6445 Office*

*Design Certification*

*The drawings, construction notes, and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas §35-4-21. The information contained herein reflects the construction of temporary completion and flow back pits. The computed above grade storage volume(s) for the proposed pits is less than 15 acre feet, the filling method shall be pumped, and all pits shall be lined as indicated.*

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

*AFFECTED PROPERTIES FOR PROPOSED WELL PAD SITE*

*MANNINGTON DISTRICT - MARION COUNTY, WV*
*GRANT DISTRICT - WETZEL COUNTY, WV*
*SARDIS DISTRICT - HARRISON COUNTY, WV*

*Larry Hood*
*TM 35 - PCL 39*
*117 Acres+/-*
*SITE DISTURBANCE:*
*TOPSOIL STOCKPILE = 0.31 ACRES*
*TOTAL DISTURBANCE = 0.37 ACRES*
*TOTAL WOOD REMOVAL = 0.07*

*Coastal Forest Resources*
*TM 34 - PCL 12*
*109 Acres+/-*
*SITE DISTURBANCE:*
*TOPSOIL STOCKPILE = 1.76 ACRES*
*TIMBER / BRUSH STORAGE = 3.00 ACRES*
*COMPLETION PIT STOCKPILE = 1.16 ACRES*
*COMPLETION PIT = 1.08 ACRES*
*TOTAL DISTURBANCE = 3.41*
*TOTAL WOOD REMOVAL = 5.45 ACRES*

*Tall Timber*
*TM 34 - PCL 34*
*112 Acres+/-*
*SITE DISTURBANCE:*
*FLOWBACK PIT = 0.61 ACRES*
*FLOWBACK PIT STOCKPILES = 1.72 ACRES*
*TOTAL DISTURBANCE = 2.31 ACRES*
*TOTAL WOOD REMOVAL = 2.57 ACRES*

*Coastal Lumber Company*
*TM 38 - PCL 27*
*18 Acres+/-*
*SITE DISTURBANCE:*
*EXCESS MATERIAL STOCKPILE = 3.98 ACRES*
*TOTAL DISTURBANCE = 3.98 ACRES*
*TOTAL WOOD REMOVAL = 3.98 ACRES*

*Consolidation Coal Co*
*TM 38 - PCL 27.1*
*173 Acres+/-*
*SITE DISTURBANCE:*
*TOPSOIL STOCKPILE = 1.80 ACRES*
*COMPLETION PIT STOCKPILE = 4.11 ACRES*
*COMPLETION PIT = 1.57 ACRES*
*COMPLETION PIT ACCESS ROAD / TURNAROUND = 11.80 ACRES*
*WELL PAD = 2.34 ACRES*
*MAIN ACCESS ROAD = 1.98 ACRES*
*TOTAL DISTURBANCE = 24.08 ACRES*
*TOTAL WOOD REMOVAL = 24.08 ACRES*

*Coastal Forest Resources Company*
*TM 38 - PCL 27.2*
*27 Acres+/-*
*SITE DISTURBANCE:*
*COMPLETION PIT = 2.20 ACRES*
*COMPLETION PIT ACCESS ROAD / TURNAROUND = 1.24 ACRES*
*EXCESS MATERIALS STOCKPILE = 1.78*
*TIMBER / BRUSH STORAGE = 1.40 ACRES*
*WELL PAD = 4.83 ACRES*
*FLOWBACK PIT ACCESS ROAD = 0.17 ACRES*
*TOTAL DISTURBANCE = 11.88 ACRES*
*TOTAL WOOD REMOVAL = 11.88 ACRES*

*Coastal Forest Resources Company*
*TM 38 - PCL 28*
*18.5 Acres+/-*
*SITE DISTURBANCE:*
*WELL PAD = 0.87 ACRES*
*TIMBER / BRUSH STORAGE = 1.08 ACRES*
*FLOWBACK PIT ACCESS ROAD / TURNAROUND = 7.95 ACRES*
*FLOWBACK PIT = 0.95 ACRES*
*FLOWBACK PIT STOCKPILE = 1.73 ACRES*
*TOTAL DISTURBANCE = 12.58 ACRES*
*TOTAL WOOD REMOVAL = 12.58 ACRES*

*Consolidation Coal Co*
*TM 38 - PCL 29*
*25 Acres+/-*
*SITE DISTURBANCE:*
*MAIN ACCESS ROAD = 1.08 ACRES*
*EXCESS SPOIL STOCKPILE = 0.17 ACRES*
*WELL PAD = 0.99 ACRES*
*TOTAL DISTURBANCE = 1.79 ACRES*
*TOTAL WOOD REMOVAL = 2.05 ACRES*

*James Wayne Moore et al*
*TM 53 - PCL 4*
*57 1/8 Acres+/-*
*SITE DISTURBANCE:*
*FLOWBACK PIT ACCESS ROAD = 0.79 ACRES*
*EXCESS MATERIAL STOCKPILE = 0.99 ACRES*
*WELL PAD = 0.34 ACRES*
*FLOWBACK PIT = 0.03 ACRES*
*FLOWBACK PIT STOCKPILES = 0.11 ACRES*
*TOTAL DISTURBANCE = 1.57 ACRES*
*TOTAL WOOD REMOVAL = 1.32 ACRES*

*Consolidation Coal Company*
*TM 52 - PCL 8.1*
*15 Acres+/-*
*SITE DISTURBANCE:*
*MAIN ACCESS ROAD = 0.44 ACRES*
*EXCESS MATERIAL STOCKPILE = 3.05 ACRES*
*MURRAY ENERGY ACCESS ROAD = 1.11 ACRES*
*TOTAL DISTURBANCE = 1.66 ACRES*
*TOTAL WOOD REMOVAL = 4.16 ACRES*

*Consolidation Coal Company*
*TM 52 - PCL 7*
*85 Acres+/-*
*SITE DISTURBANCE:*
*MURRAY ENERGY ACCESS ROAD = 1.6 ACRES*
*TOTAL DISTURBANCE = 1.6 ACRES*

*Consolidation Coal Company*
*TM 53 - PCL 20*
*15 9 Acres+/-*
*SITE DISTURBANCE:*
*MURRAY ENERGY ACCESS ROAD = 1.14 ACRES*
*TOTAL DISTURBANCE = 1.14 ACRES*

*Consolidation Coal Company*
*TM 53 - PCL 21*
*1.58 Acres+/-*
*SITE DISTURBANCE:*
*MURRAY ENERGY ACCESS ROAD = 0.93 ACRES*
*TOTAL DISTURBANCE = 0.93 ACRES*

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DMH
2-10-15

| DATE | REVISIONS |
|---|---|
| 1/29/2015 | ADDED NEW DELINEATIONS |

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

Hornor Bros. Engineers
Since 1902
Civil, Mining, Environmental and Contracting Engineering

EQT

THIS DOCUMENT PREPARED FOR EQT PRODUCTION COMPANY

COVER SHEET / LOCATION MAP
EQT FOL 109
WELL PAD SITE
MANNINGTON DISTRICT - MARION COUNTY, WV
GRANT DISTRICT - WETZEL COUNTY, WV

Date: 12/12/2014
Scale: AS SHOWN
Designed By: TBC
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