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: 47-10303080, 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: 514553
Farm Name: CONSOLIDATION COAL COMPA
API Well Number: 47-10303080
Permit Type: Horizontal 6A Well
Date Issued: 07/02/2015

Promoting a healthy environment.

API Number: _____

PERMIT CONDITIONS 47 10 3 03 0 80

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)

4710303080

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

2) Operator's Well Number: 514553 Well Pad Name FOL109

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

4) Elevation, current ground: 1,507.0 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: 13,183
11) Proposed Horizontal Leg Length 4,154
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: _____

7/1/15

WW - 6B
(3/13)

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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	13,183	13,183	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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(3/13)

47 10303080

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 4128 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.

COS 7/1/15

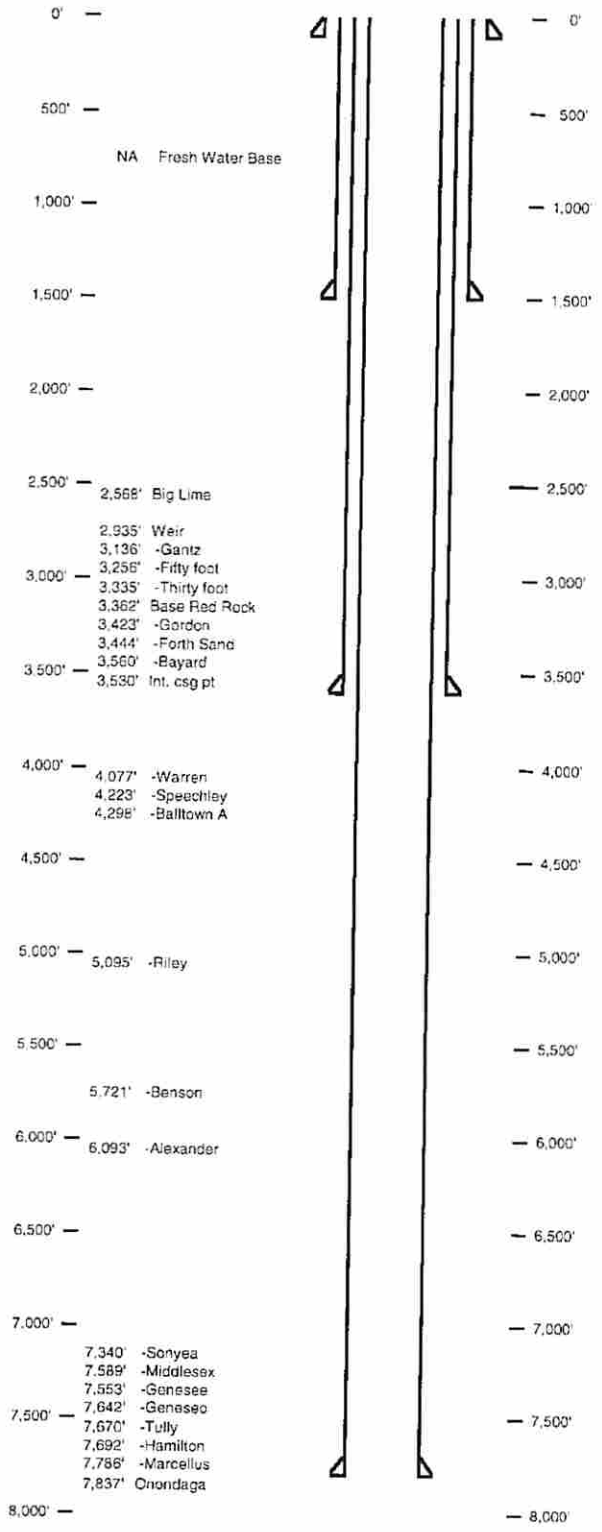
*Note: Attach additional sheets as needed.

47103030 80

Well Schematic
EQT Production

Well Name [redacted]
County [redacted]
State West Virginia

Elevation KB: [redacted]
Target [redacted]
Prospect
Azimuth [redacted]
Vertical Section



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

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

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

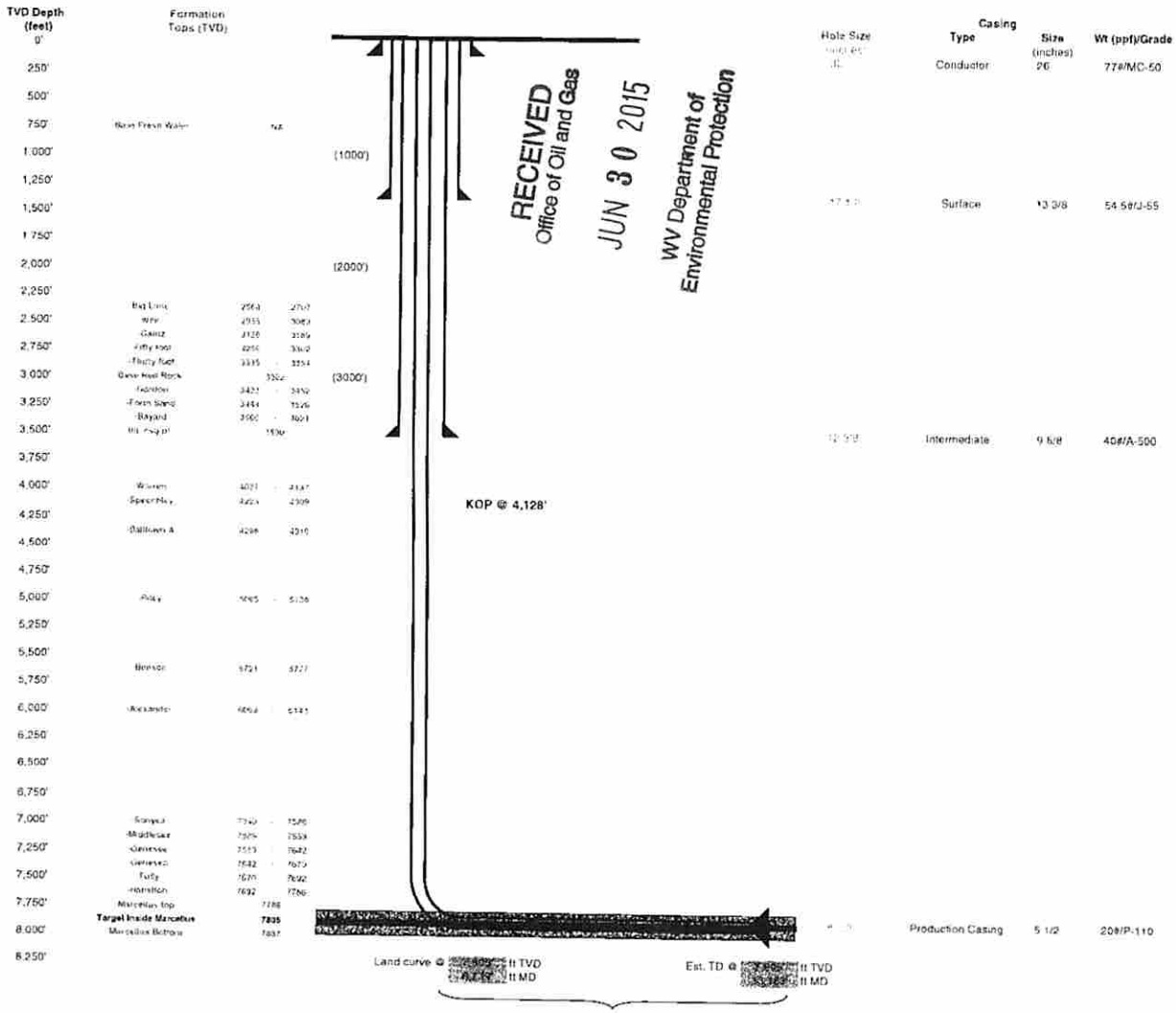
KOP = [redacted] ft MD
10 Deg DLS

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

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

Well [redacted] (FOL109H8)
EOT Production
[redacted] West Virgina

Azimuth [redacted]
Vertical Section [redacted]



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

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EQT

4710303080

June 25, 2015

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

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Office of Oil and Gas
JUN 30 2015
WV Department of
Environmental Protection

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.

4710303080

west virginia department of environmental protection

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

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

March 18, 2014

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

Re: Cement Variance Request

Dear Sir or Madam,

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

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

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

Sincerely,

James Peterson

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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

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

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

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

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

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

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

ORDER

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA

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

James Martin, Chief
Office of Oil and Gas

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Page ____ of ____

WW-9
(5/13)

API No. 47 - 103 - 0
Operator's Well No. 514553

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 ____

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

DMH 2-9-15

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

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. 514553

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: [signature]

Comments:

Title: Oil + Gas Inspector Date: 2-9-15

Field Reviewed? (✓) Yes ( ) No

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EQT

Where energy meets innovation.sm

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

Oil + Gas Inspector
Title

2-9-15
Date

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Folsom & Wallace 7.5' USGS QUADRANGLE		Proposed Disturbance Area	
Projected culvert inventory. (for bid purposes only)		Well Site Location	See Site Plan
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan
DRAWN BY: Dale Tomlin PS	DATE: December 5, 2014	FILE NO. 165-13	DRAWING FILE NO. 165-13 Rec Plan

Note: SEE SITE PLAN OF FOLSOM 109 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

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SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606

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

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

Folsom & Wallace 7.5' USGS QUADRANGLE		Proposed Disturbance Area		
Projected culvert inventory. (for bid purposes only)		Well Site Location	See Site Plan	
15" minimum diameter culverts	See Site Plan	Proposed Access Road	See Site Plan	
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance	See Site Plan	
DRAWN BY: Dale Tomlin PS	DATE: December 5, 2014	FILE NO. 165-13	DRAWING FILE NO. 165-13 Rec Plan	

Note: SEE SITE PLAN OF FOLSOM 109 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

DMH
2-9-15

SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606

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

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

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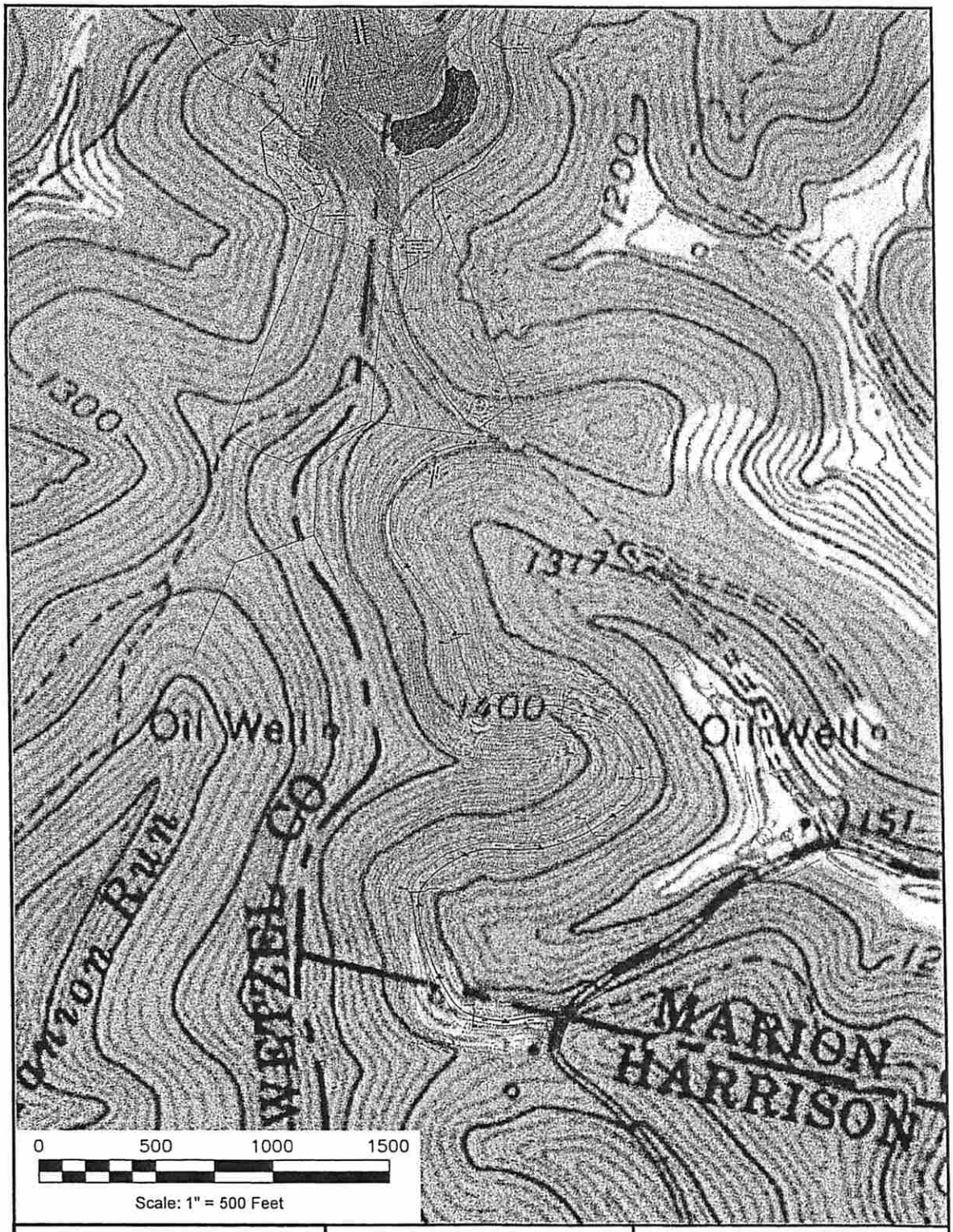

Folsom & Wallace 7.5' USGS QUADRANGLE		Proposed Disturbance Area		
Projected culvert inventory. (for bid purposes only)		Well Site Location		See Site Plan
15" minimum diameter culverts	See Site Plan	Proposed Access Road		See Site Plan
24" minimum diameter culverts	See Site Plan	Approximate Total Disturbance		See Site Plan
DRAWN BY: Dale Tomlin PS	DATE: December 5, 2014	FILE NO. 165-13	DRAWING FILE NO. 165-13 Rec Plan	

Note: SEE SITE PLAN OF FOLSOM 109 FOR COMPLETE GRADING & DRAINAGE CONSTRUCTION INCLUDING EROSION & SEDIMENT CONTROL DETAILS, ETC.

DmH 2-4-15

SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606

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

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

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47 10303080

EQT Production Water plan
Offsite disposals for Marcellus wells

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

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

TRI COUNTY WASTE WATER MANAGEMENT, INC.
1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

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

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

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

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

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

DMH
2-9-15

RECEIVED
Office of Oil and Gas
FEB 17 2015
WV Department of
Environmental Protection

47 10303080

WV 514553
EQT Production Company
L.G. Robinson et. vir. Lease
2600 Acres

9922'

LATITUDE 39 - 30 - 00

LONGITUDE 80 - 27 - 30

7157'

GRID NORTH

- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- (5) WV County Route
- [5] WV State Route

Folsom 109:
H1, 514495 · H2, 514496 · H3, 514497 · H4, 514498 · H5, 514499 · H6, 514500 · H7, 514552 · H8, 514553 · H9, 514554 · H10, 514555 · H11, 515487 · H12, 515488 · H13, 515489 · H14, 515490 · H15, 515491 · H16, 515492

WV 514553 coordinates:
NAD 27 N: 358,642.27 E: 1,719,572.99
NAD 27 Lat: 39.480427 Long: -80.493504
NAD 83 UTM N: 4,370,224.23 E: 543,576.32

WV 514553 Landing Point coordinates:
NAD 27 N: 357,976.25 E: 1,716,620.35
NAD 27 Lat: 39.478508 Long: -80.503937
NAD 83 UTM N: 4,370,006.31 E: 542,680.14

WV 514553 Bottom Hole coordinates:
NAD 27 N: 361,683.00 E: 1,715,271.20
NAD 27 Lat: 39.488643 Long: -80.508864
NAD 83 UTM N: 4,371,128.74 E: 542,250.27

West Virginia Coordinate System of 1927 (North Zone) based upon Differential GPS Measurements.
Plat orientation, corner and well ties are based upon the grid north meridian.
Well location references are based upon the grid north meridian. UTM coordinates are NAD83, Zone 17, Meters.

Lease No. 713351

WV 514553 Bottom Hole

WV 514553 Landing Point

Abe Ice 34 Acres

Sams Run

Wetzel Co. / Marion Co.

S 20°49'30" W 788.07'

Well References:
Folsom 109 H8 514553
AZ63°31'49" 283.17' 21" Sugar Maple
AZ117°46'59" 534.91' 13" Hickory
AZ223°59'58" 430.83' 14" Red Maple

Scale 1" = 2000'

(-⊕-) Denotes Location of Well on United States Topographic Maps 1" = 500'

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.

P.S. 2092

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

SEAL

FILE NO: 165-13
DRAWING NO: Folsom 109 H8
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

DMH 2-9-16

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

DATE: February 2 20 15
OPERATOR'S WELL NO. WV 514553
API WELL NO
47 - 103 - (PERMIT)
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION : ☐ STORAGE ☐ DEEP ☒ SHALLOW
LOCATION: ELEVATION: Original 1507 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

RECEIVED
Office of Oil and Gas
FEB 17 2015
WV Department of Environmental Protection

47 10303080

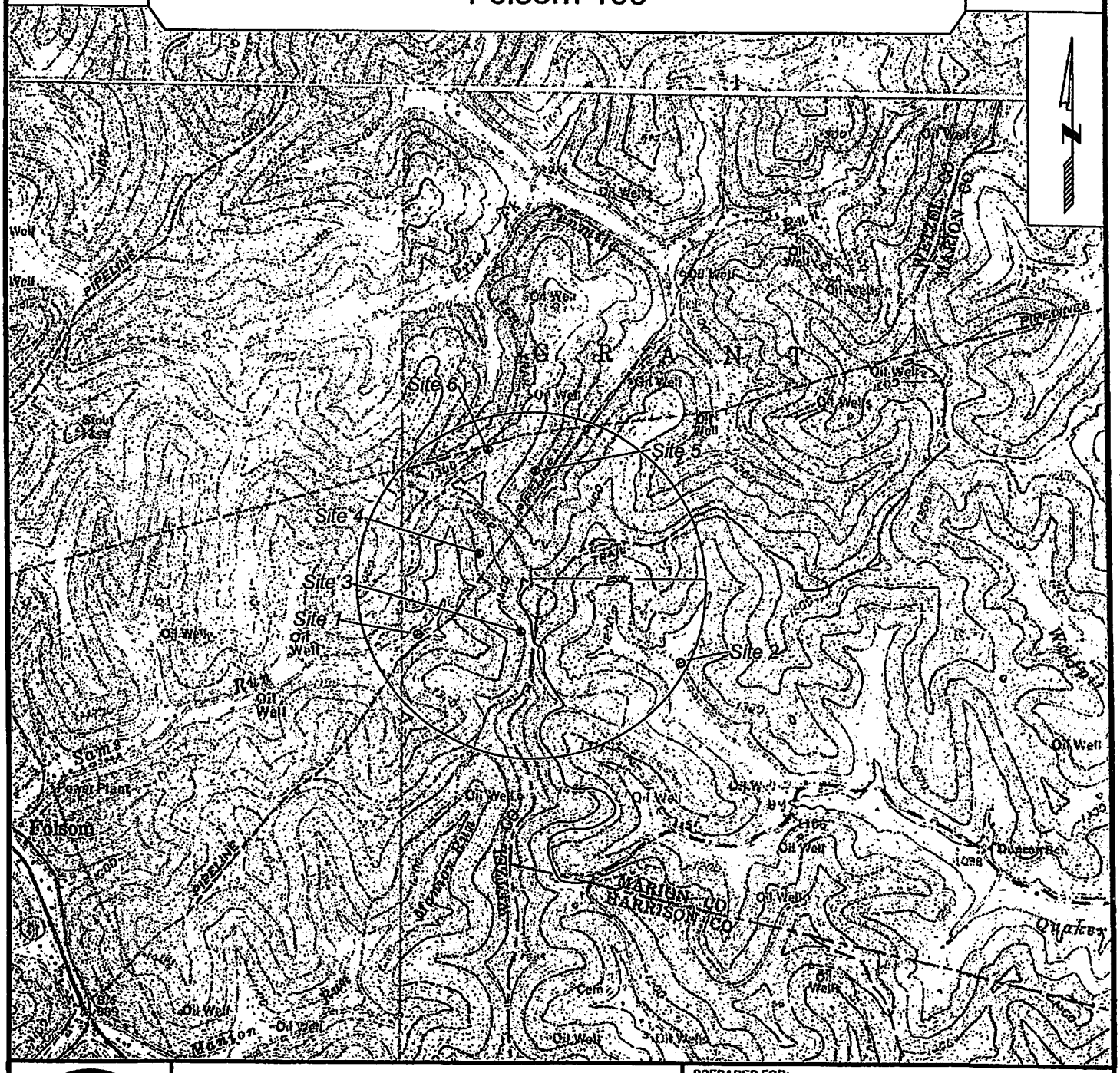
Topo Quad: Wallace 7.5' Scale: 1 " = 2000'

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

Permit 2-5-15

PREPARED FOR:

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

RECEIVED
Office of Oil and Gas
FEB 17 2015
WV Department of
Environmental Protection

EQT Production Water plan
Offsite disposals for Marcellus wells

4710303080

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

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

TRI COUNTY WASTE WATER MANAGEMENT, INC.
1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
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Washington County/Belpre Twp.
Permit # 8462

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

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

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Office of Oil and Gas
FEB 09 2015
WV Department of
Environmental Protection

EQT

Water Source Identification

47103-3080

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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WV Department of
Environmental Protection

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

(Insert additional pages as needed)

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Office of Oil and Gas

FEB 09 2015

WV Department of
Environmental Protection

Topo Quad: Wallace 7.5' Scale: 1 " = 2000'

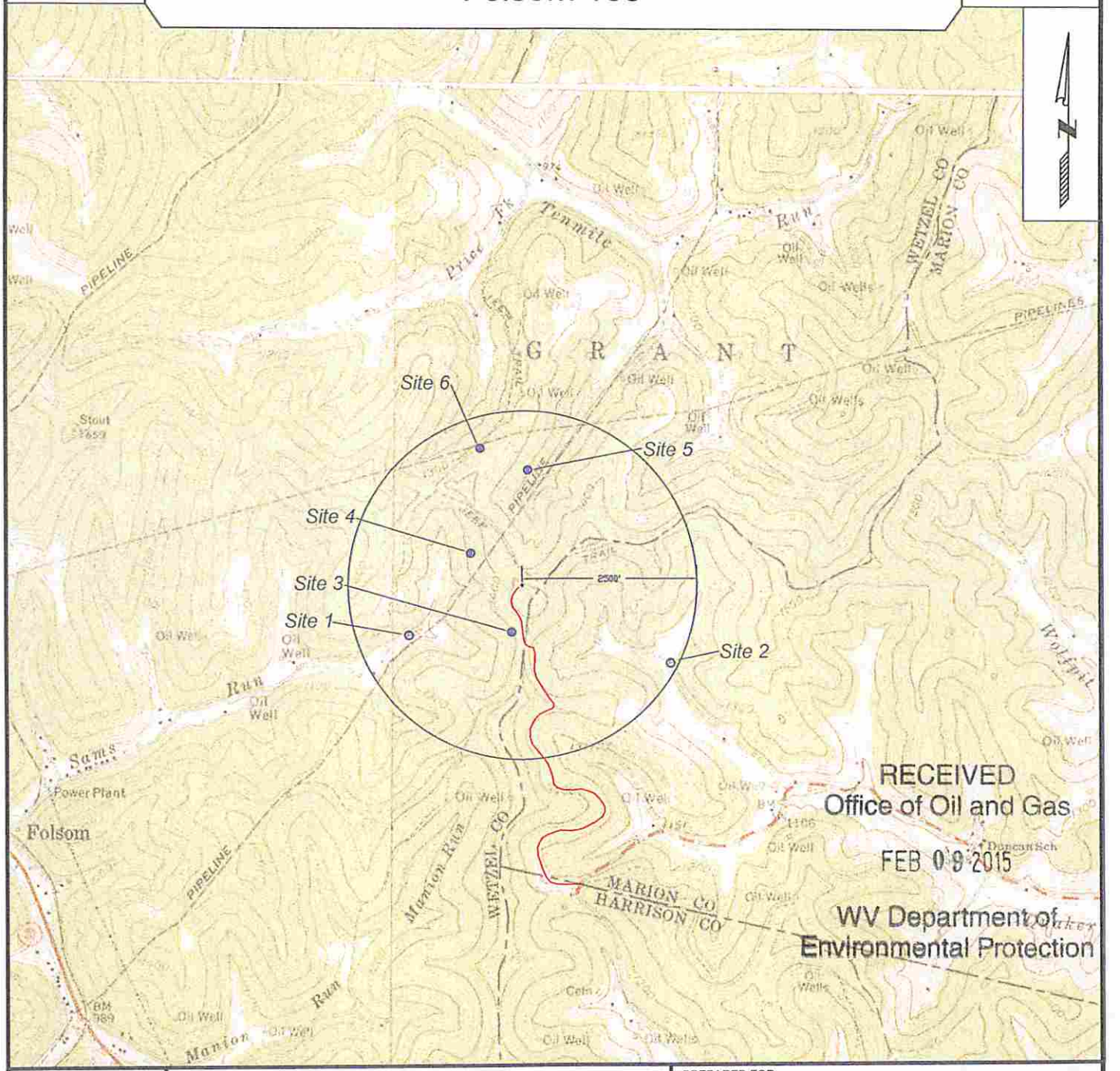
County: Wetzel Date: November 25, 2014

District: Grant Project No: 165-34600-13

47 103 0080

Water

Folsom 109



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Office of Oil and Gas
FEB 09 2015
WV Department of
Environmental Protection

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

WV 514553
EQT Production Company
L.G. Robinson et. vir. Lease
2600 Acres

Folsom 109

H1, 514495	H9, 514554
H2, 514496	H10, 514555
H3, 514497	H11, 515487
H4, 514498	H12, 515488
H5, 514499	H13, 515489
H6, 514500	H14, 515490
H7, 514552	H15, 515491
H8, 514553	H16, 515492

- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route 5
- WV State Route 5

9922'

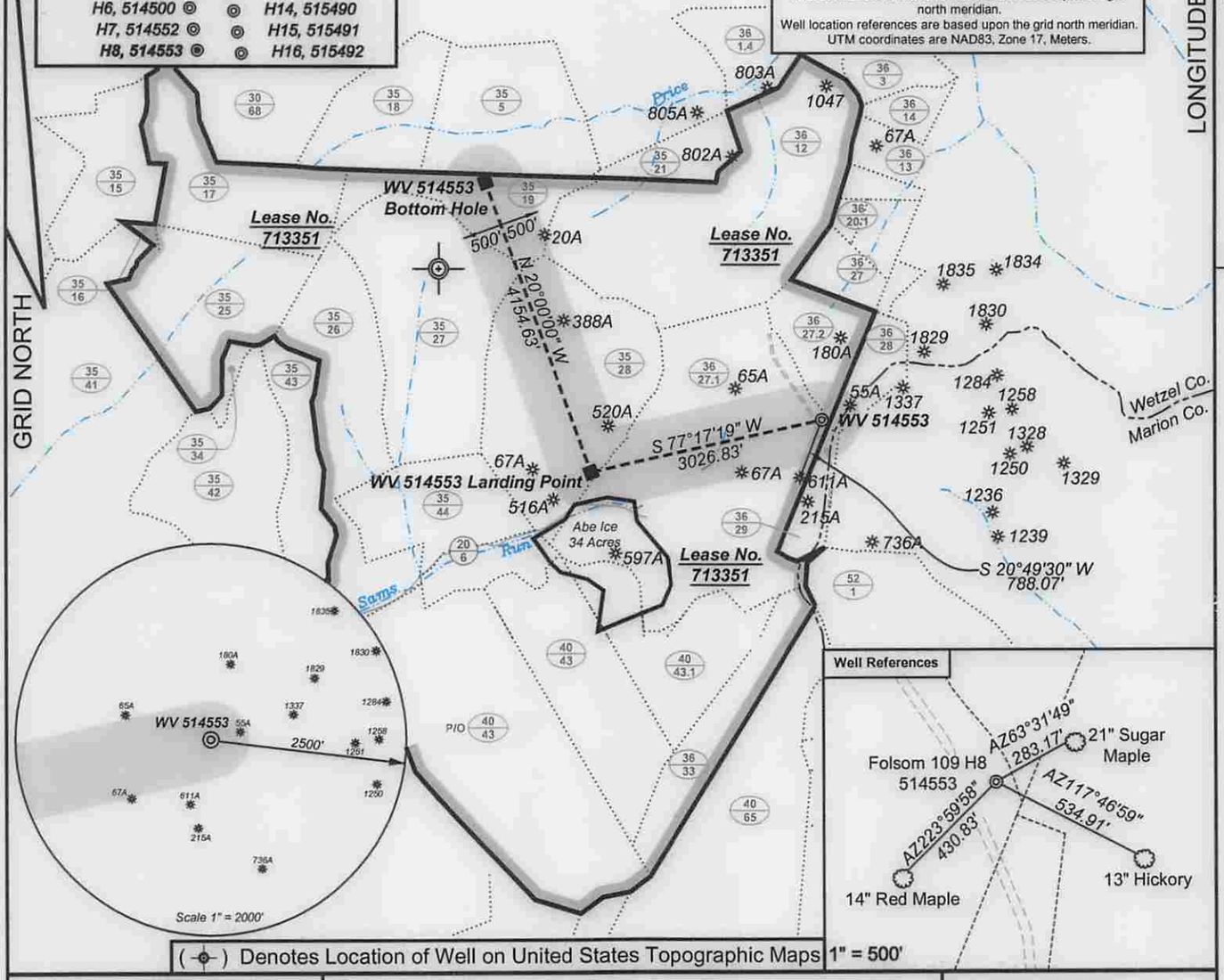
LATITUDE 39 - 30 - 00

LONGITUDE 80 - 27 - 30

7157'

WV 514553 coordinates:
NAD 27 N: 358,642.27 E: 1,719,572.99
NAD 27 Lat: 39.480427 Long: -80.493504
NAD 83 UTM N: 4,370,224.23 E: 543,576.32
WV 514553 Landing Point coordinates:
NAD 27 N: 357,976.25 E: 1,716,620.35
NAD 27 Lat: 39.478508 Long: -80.503937
NAD 83 UTM N: 4,370,006.31 E: 542,680.14
WV 514553 Bottom Hole coordinates:
NAD 27 N: 361,683.00 E: 1,715,271.20
NAD 27 Lat: 39.488643 Long: -80.508864
NAD 83 UTM N: 4,371,128.74 E: 542,250.27

West Virginia Coordinate System of 1927 (North Zone) based upon Differential GPS Measurements.
Plat orientation, corner and well ties are based upon the grid north meridian.
Well location references are based upon the grid north meridian.
UTM coordinates are NAD83, Zone 17, Meters.



Well References

(⊕) Denotes Location of Well on United States Topographic Maps

1" = 500'

ALLEGHENY SURVEYS, INC.

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

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 H8
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. WV 514553
API WELL NO H6A
47 - 103 - 03080
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL
(IF GAS) PRODUCTION : ☐ STORAGE ☐ DEEP ☒ SHALLOW
LOCATION: ELEVATION: Original 1507 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

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Office of Oil and Gas
FEB 05 2015
WV Department of Environmental Protection

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

WW-6A1
(5/13)

Operator's Well No. 47 514553

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

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

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or 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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Office of Oil and Gas
FEB 09 2015
WV Department of Environmental Protection

4710303080

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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FEB 06 2015
WV Department of
Environmental Protection

4710303080

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: V G Beghini

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

Equitable Resources, Inc.

By: David L. Porges

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

RECEIVED
Office of Oil and Gas

FEB 09 2015

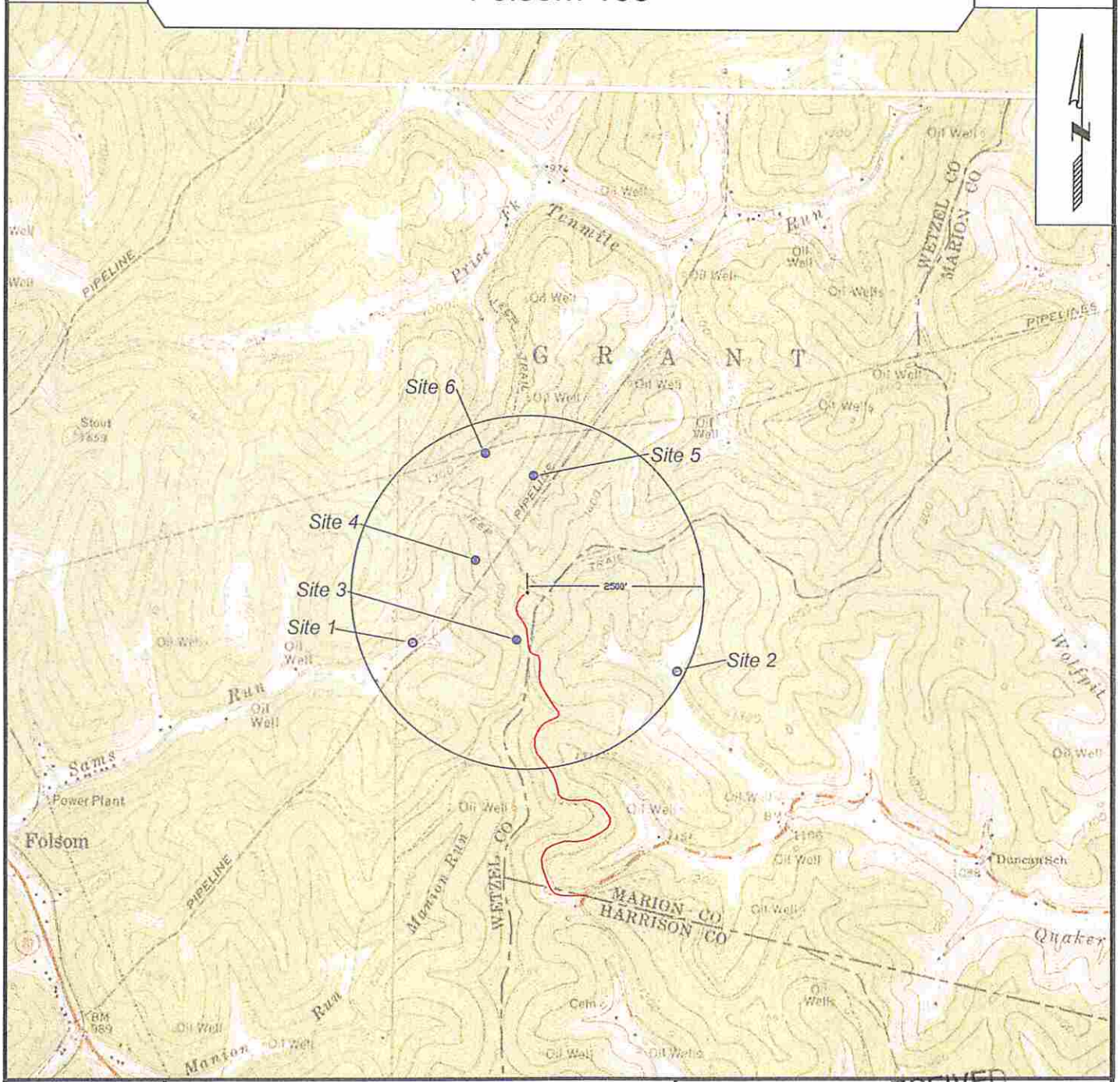
WV Department of
Environmental Protection

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

47 103030 -

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

RECEIVED
Office of Oil and Gas
FEB 09 2015
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

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry. 47-105-03080

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
Consolidation Coal Company
Name: Engineering & Operations Support Dept. Coal
Address: 1000 CONSOL Energy Drive
Canonsburg, PA 15317-6506

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

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

*Please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Wetzel
Dist/Map/Par: Grant / Map 40 / Parcel 43, 43.1
Quadrangle: Folsom

Approx. Latitude & Longitude: 39.47413 / -80.50296
Public Road Access: CR 20/6
Watershed: Sams Run
Generally Used Farm Name:

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Office of Oil and Gas
FEB 05 2015
WV Department of
Environmental Protection

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

Notice is hereby given by:

Well Operator: EQT Production Company
Telephone: 304-848-0099
Facsimile: 304-848-0040
Email: eqtlandentrynotice@eqt.com

Address: 115 Professional Place, Bridgeport, WV 26330
EQT Representative: Kathy Kugel
Signature: Kathy Kugel

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

47 10 3 03 0 80

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

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

Date of Notice: 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:

[ ] 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		
Email:	eqtlandentrynotice@eqt.com	Signature:	Kathy Kugel

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 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.

RECEIVED
Office of Oil and Gas
FEB 02 2015
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 514553

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

47 103 0370

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:	4,370,224.000000
County:	Wetzel		Northing:	543,576.000000
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:
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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Office of Oil and Gas
FEB 06 2015
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 514553

47 10303080

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)

☑ 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: 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:	4,370,224.000000
County:	Wetzel		Northing:	543,576.000000
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

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Office of Oil and Gas
FEB 06 2015
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. 514553

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

47 103 0308 0

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: 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:	4,370,224.000000
County:	Wetzel		Northing:	543,576.000000
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

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Office of Oil and Gas
FEB 06 2015
WV Department of
Environmental Protection

WW-6AW
(1-12)

API NO.
OPERATOR WELL NO. 514553 FOL109 H8
Well Pad Name: FOL109

47 103 03100

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:	1,719,573.000 ft
County:	Wetzel		North:	358,642.000 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 358,642.000 ft, East 1,719,573.000 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

RECEIVED
Office of Oil and Gas
FEB 09 2015
WV Department of Environmental Protection

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

4710303080

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.

RECEIVED
Office of Oil and Gas
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

4710303080

Anticipated Frac Additives

Chemical Names and CAS numbers

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

DMH
2-9-15

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FEB 17 2015
WV Department of
Environmental Protection

47103030080

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Office of Oil and Gas
FEB 17 2015
WV Department of
Environmental Protection

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	5410(C0285C & 5404(C0155D	
ACREAGES OF CONSTRUCTION IN FLOODPLAIN	N/A	

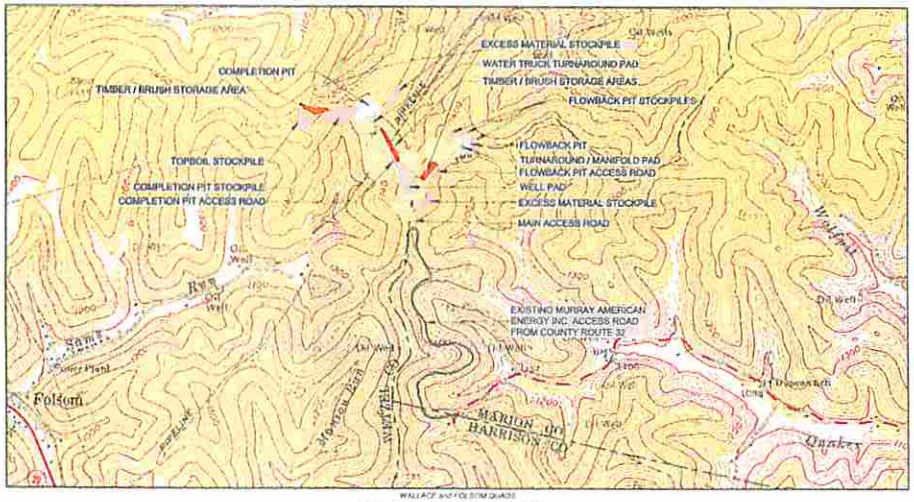
NO WETLANDS ARE IMPACTED OR STREAMS IMPACTED

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
2 1000 2000 3000

SITE LOCATIONS
NAD 83

	LATITUDE	LONGITUDE
Center of Well Pad	39.480551	-80.493377
Center of Flow Back Pit	39.482585	-80.486881
Center of Completion Pit	39.484412	-80.493858
Int. CR50 Main Access	39.479080	-80.482824
Murray Access at County Rt. 32	39.486882	-80.490570

GRAPHIC SCALE
0 1000 2000
1 INCH = 1 MILE

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

AFFECTED PROPERTIES FOR PROPOSED WELL PAD SITE
WASHINGTON DISTRICT - MARION COUNTY, WV
GRANT DISTRICT - WETZEL COUNTY, WV
SARDIS DISTRICT - HARRISON COUNTY, WV

Larry Hood
TM 55 - PCL 28
117 Acres±
SITE DISTURBANCE
TOPSOIL STOCKPILE = 0.11 ACRES
TOTAL DISTURBANCE = 0.27 ACRES
TOTAL WOOD REMOVAL = 0.27

Coastal Forest Resources
TM 38 - PCL 17
158 Acres±
SITE DISTURBANCE
TOPSOIL STOCKPILE = 1.75 ACRES
TIMBER / BRUSH STORAGE = 1.65 ACRES
COMPLETION PIT STOCKPILE = 1.16 ACRES
COMPLETION PIT = 1.08 ACRES
TOTAL DISTURBANCE = 5.65
TOTAL WOOD REMOVAL = 5.45 ACRES

Tall Timber
TM 38 - PCL 24
122 Acres±
SITE DISTURBANCE
FLOWBACK PIT = 0.81 ACRES
FLOWBACK PIT STOCKPILES = 1.73 ACRES
TOTAL DISTURBANCE = 2.33 ACRES
TOTAL WOOD REMOVAL = 2.33 ACRES

Coastal Lumber
Company
TM 38 - PCL 21
15 Acres±
SITE DISTURBANCE
EXCESS MATERIAL STOCKPILE 5 = 0.58 ACRES
TOTAL DISTURBANCE = 0.58 ACRES
TOTAL WOOD REMOVAL = 0.58 ACRES

Consolidation Coal Co
TM 38 - PCL 37.1
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 = 2.94 ACRES
MAIN ACCESS ROAD = 1.90 ACRES
TOTAL DISTURBANCE = 24.09 ACRES
TOTAL WOOD REMOVAL = 24.09 ACRES

Coastal Forest
Resources Company
TM 38 - PCL 37.3
27 Acres±
SITE DISTURBANCE
COMPLETION PIT = 2.20 ACRES
COMPLETION PIT ACCESS ROAD /
TURNAROUND = 1.05 ACRES
EXCESS MATERIAL STOCKPILE = 1.76
TIMBER / BRUSH STORAGE = 1.30 ACRES
WELL PAD = 4.83 ACRES
FLOWBACK PIT ACCESS ROAD = 0.73 ACRES
TOTAL DISTURBANCE = 11.84 ACRES
TOTAL WOOD REMOVAL = 11.84 ACRES

Coastal Forest Resources Company
TM 26 - PCL 23
15.5 Acres±
SITE DISTURBANCE
WELL PAD = 6.87 ACRES
TIMBER / BRUSH STORAGE = 1.09 ACRES
FLOWBACK PIT ACCESS ROAD / TURNAROUND
= 7.99 ACRES
FLOWBACK PIT = 0.96 ACRES
FLOWBACK PIT STOCKPILE = 1.73 ACRES
TOTAL DISTURBANCE = 12.50 ACRES
TOTAL WOOD REMOVAL = 12.05 ACRES

Consolidation Coal Co
TM 38 - PCL 29
25 Acres±
SITE DISTURBANCE
MAIN ACCESS ROAD = 1.08 ACRES
EXCESS SPOIL STOCKPILE = 0.13 ACRES
WELL PAD = 0.86 ACRES
TOTAL DISTURBANCE = 2.16 ACRES
TOTAL WOOD REMOVAL = 2.08 ACRES

James Wayne Moore et al
TM 53 - PCL 9
57 1/8 Acres±
SITE DISTURBANCE
FLOWBACK PIT ACCESS ROAD = 0.75 ACRES
EXCESS MATERIAL STOCKPILE = 2.09 ACRES
WELL PAD = 6.34 ACRES
FLOWBACK PIT = 6.05 ACRES
FLOWBACK PIT STOCKPILE = 0.51 ACRES
TOTAL DISTURBANCE = 3.53 ACRES
TOTAL WOOD REMOVAL = 7.32 ACRES

Consolidation Coal Company
TM 53 - PCL 8.1
10 Acres±
SITE DISTURBANCE
MAIN ACCESS ROAD = 0.44 ACRES
EXCESS MATERIAL STOCKPILE = 0.05 ACRES
MURRAY ENERGY ACCESS ROAD = 1.13 ACRES
TOTAL DISTURBANCE = 1.86 ACRES
TOTAL WOOD REMOVAL = 0.95 ACRES

Consolidation Coal Company
TM 53 - PCL 1
85 Acres±
SITE DISTURBANCE
MURRAY ENERGY ACCESS ROAD = 3.6 ACRES
TOTAL DISTURBANCE = 3.6 ACRES

Consolidation Coal Company
TM 53 - PCL 35
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 = 0.83 ACRES
TOTAL DISTURBANCE = 0.83 ACRES

Project Contacts

Fred Gray 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. - Horner Brothers Engineers
304-624-6445 Office

Tom Conathers PE, PS - Horner Brothers Engineers
304-624-6445 Office

Design Certification

This 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.

DMH
2-10-15

SHEET INDEX

COVER SHEET / LOCATION MAP	1
EXISTING CONDITIONS PLAN	2
OVERVIEW PLAN	3
SCHEDULE OF QUANTITIES	4
CONSTRUCTION, GENERAL AND E&S NOTES	5
MURRAY ROAD	6-8
FINAL DESIGN PLANS	9-14
WELL PAD PROFILE & CROSS SECTIONS	15-22
COMPLETION PIT PROFILE & CROSS SECTIONS	23-25
FLOWBACK PIT PROFILE & CROSS SECTIONS	26
MURRAY ROAD PROFILE & CROSS SECTIONS	27-31
MAIN ACCESS ROAD PROFILE & CROSS SECTIONS	32-34
COMP. PIT ACCESS ROAD PROFILE & CROSS SECTIONS	35-42
FLOWBACK PIT ACCESS ROAD PROFILE & CROSS SECTIONS	43-48
CONSTRUCTION DETAILS	49-51
RECLAMATION PLANS	52-57

DATE	REVISIONS
1/29/2015	ADDED NEW DELINEATIONS

Date: 10/13/2014
Scale: AS SHOWN
Designed By: DSC
File No. 47-103-03008 (47-103-Survey)
Page 1 of 57

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

Horner Bros. Engineers
Civil Mining Environmental and
Surveying

EQT
Where energy meets innovation

THIS DOCUMENT PREPARED FOR EQT PRODUCTION COMPANY

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