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west virginia department of environmental protection

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

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

January 23, 2018

## 2017 Waiver Report

Pursuant to W. Va. Code 22-6A-2(a)(6), commencing on January 1, 2013 and each year thereafter, the Office of Oil and Gas shall submit to the Legislature a written report of the number of waivers of certain minimum requirements of Chapter 22, Article 6A granted by the Secretary during the preceding year. During the 2017 calendar year, the Office of Oil and Gas granted nine (9) waivers from the site restriction requirements of W. Va. Code § 22-6A-12(b), which states:

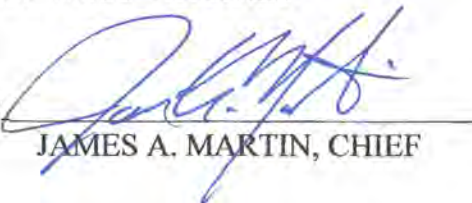
No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream...or a wetland... The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed 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.

Copies of the Orders granting the waivers are attached.

Thus submitted, the 23rd day of January 2018.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF



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west virginia department of environmental protection

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601 57<sup>th</sup> Street  
Charleston, WV 25304  
(304) 926-0450 fax (304) 926-0452

Jim Justice, Governor  
Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

**TO:** EQT Production Company  
115 Professional Place P.O. Box 280  
Bridgeport WV, 26330

**DATE:** March 2, 2017  
**ORDER NO.:** 2017-W-2

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to EQT Production Company (hereinafter "EQT" or "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. EQT is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 115 Professional Place, P.O. Box 280, Bridgeport, West Virginia.
3. On October 2, 2015, EQT submitted well work permit applications identified as API#s 47-085-10258, 47-085-10259, 47-085-10260, 47-085-10261, 47-085-10262, 47-085-10263 and 47-085-10264. The proposed wells are to be located on the PUL 97 Pad in Clay District of Ritchie County, West Virginia.
4. On October 2, 2015, EQT requested a waiver for Wetland WL-1 and Wetland WL-3 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API# 47-085-10258, 47-085-10259, 47-085-10260, 47-085-10261, 47-085-10262, 47-085-10263 and 47-085-10264.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland WL-1 and Wetland WL-3 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-085-10258, 47-085-10259, 47-085-10260, 47-085-10261, 47-085-10262, 47-085-10263 and 47-085-10264. The Office of Oil and Gas hereby **ORDERS** that EQT shall meet the following site construction and operational requirements for the PUL 97 well pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least a twenty four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland WL-1 shall have a compost sock sediment trap (three socks stacked in pyramidal form) that will prevent any sediment from reaching the wetland or stream from the well pad and adjacent tank pad.
- d. Wetland WL-3 shall have both a layer of 32” compost filter sock and a layer of 18” compost filter sock that will prevent any sediment from reaching the wetland or stream from the well pad and adjacent tank pad.
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- l. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 2nd day of March, 2017.

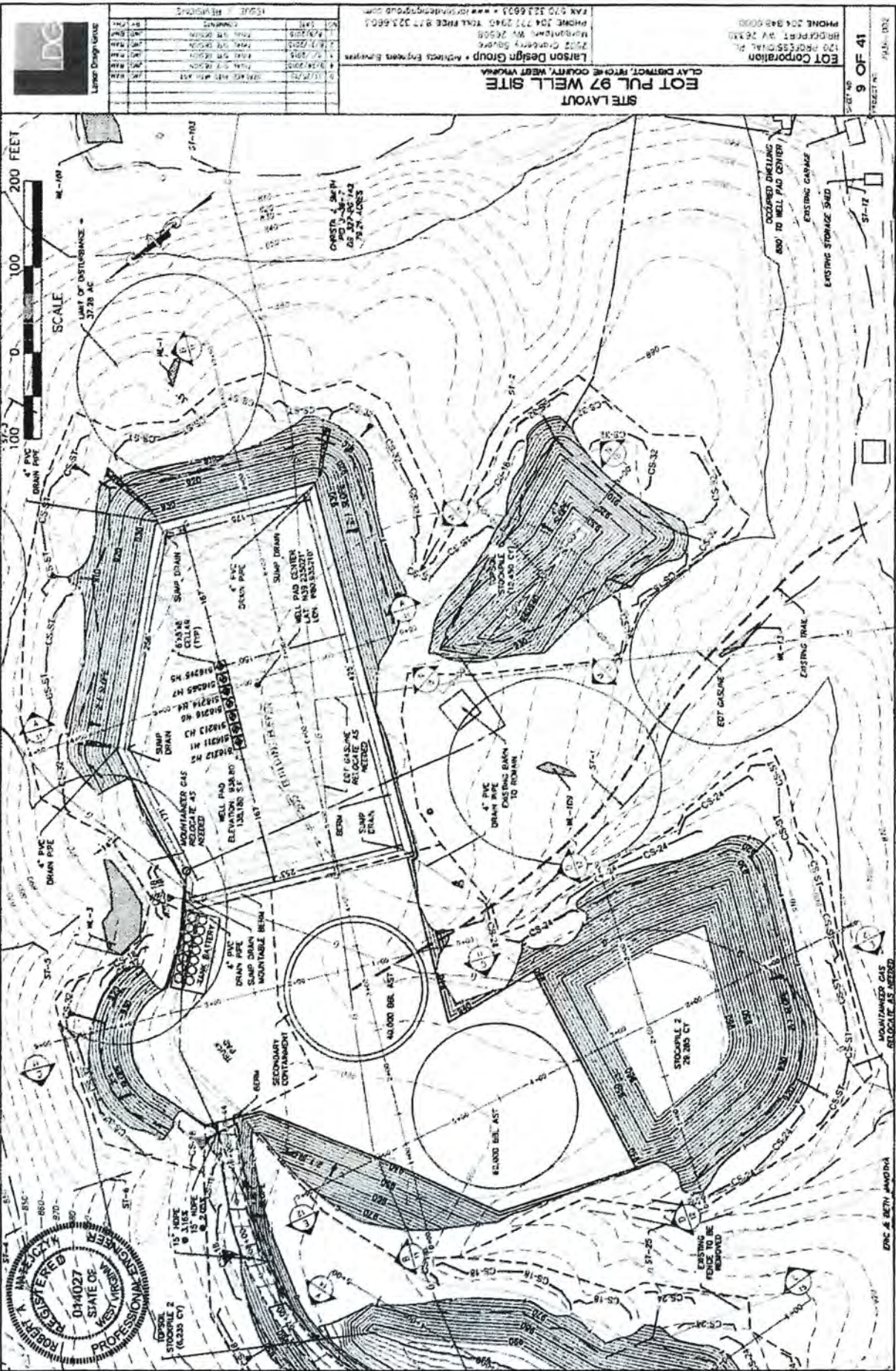
IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF



**PUL 97 Wetland Waiver - Attachment 1**



**REGISTERED PROFESSIONAL ENGINEER**  
 STATE OF WEST VIRGINIA  
 014027  
 ROBERT A. ANZICCHIO

**EOT Corporation**  
 120 Rockwell Dr. #200  
 Phone: 204.948.0000  
 FAX: 204.948.0000

**Larson Design Group - Architects Engineers**  
 2100 Cherry Street  
 Monroeville, PA 15146  
 Phone: 724.773.2040 FAX: 724.773.6601  
 FAX: 724.773.6603 www.larsondesigngroup.com

**EOT PUL 97 WELL SITE**  
 CLAY DISTRICT, PUTNAM COUNTY, WEST VIRGINIA

SHEET NO. **9 OF 41**  
 PROJECT NO. 14-01-012





west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Arsenal Resources, LLC  
6031 Wallace Rd Ext, Ste 300  
Wexford, PA 15090

DATE: December 8, 2017  
ORDER NO.: 2017-W-2

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Arsenal Resources, LLC (hereinafter "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Arsenal Resources, LLC is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 6031 Wallace Rd Ext, Ste 300, Wexford, Pennsylvania.
3. On July 5, 2016, Arsenal Resources, LLC submitted a well work permit application identified as API# 47-077-00623. Subsequent well work applications were submitted on August 14, 2017, API# 47-077-00637; August 18, 2017, API#s 47-077-00638 and 47-077-00638; August 31, 2017, API# 47-077-00640; and September 29, 2017, API# 47-077-00641. The proposed wells are to be located on the Darwin Pad in Reno District of Preston County, West Virginia.
4. On November 17, 2016, Arsenal Resources, LLC requested a waiver for Wetland 1A and Wetland 1B outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-077-00623.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”



## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland 1A and Wetland 1B from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-077-00623, 47-077-00637, 47-077-00638, 47-077-00639, 47-077-00640 and 47-077-00641 . The Office of Oil and Gas hereby **ORDERS** that Arsenal Resources, LLC shall meet the following site construction and operational requirements for the Darwin well pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland 1A shall have a compost sock sediment trap (three socks stacked in pyramidal form) that will prevent any sediment from reaching the wetland or stream from the well pad and adjacent tank pad;
- d. Wetland 1B will be mostly covered by the construction of the well pad and tank pad. The remaining portion of the wetland shall have a compost sock sediment trap (three socks stacked in pyramidal form) that will prevent any sediment from reaching the wetland or stream from the well pad and adjacent tank pad;
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- l. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 8th day of December, 2017.

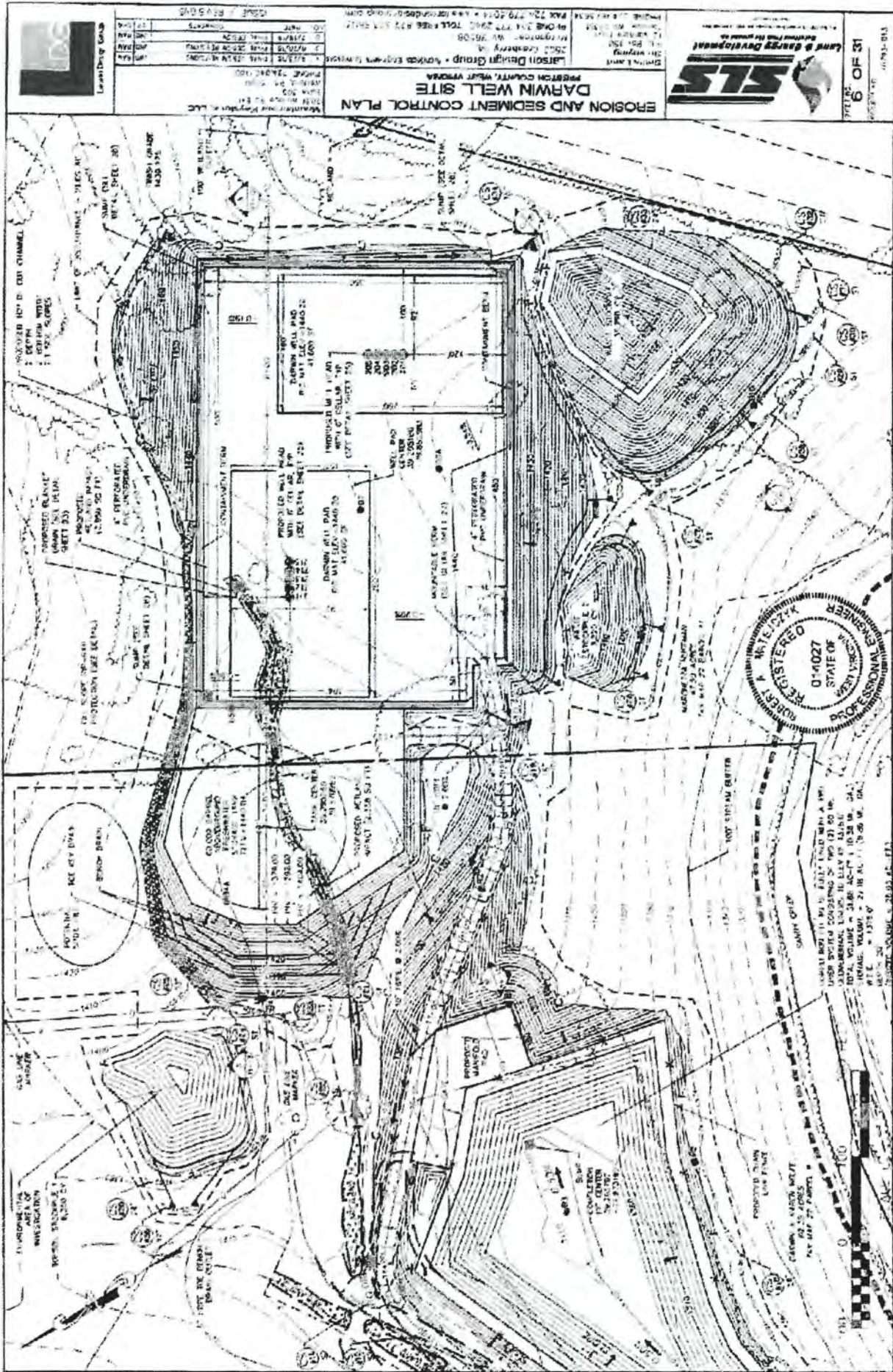
IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF



# Darwin Wetland Waiver - Attachment I







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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Chevron Appalachia, LLC  
P.O. Box 611  
Moon Township, PA 15108

DATE: February 22, 2017  
ORDER NO.: 2017-W-4

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Chevron Appalachia, LLC (hereinafter "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Chevron Appalachia, LLC is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as P.O. Box 611, Moon Township, Pennsylvania.
3. On December 1, 2016, Chevron Appalachia, LLC submitted well work permit applications identified as API#s 47-051-01897, 47-051-01898, 47-051-01899, 47-051-01900, 47-051-01901, 47-051-01902 and 47-051-01913. The proposed wells are to be located on the Hicks Pad in Clay District of Marshall County, West Virginia.
4. On December 1, 2016, Chevron Appalachia, LLC requested a waiver for Wetland W-02 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01897, 47-051-01898, 47-051-01899, 47-051-01900, 47-051-01901, 47-051-01902 and 47-051-01913.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland W-02 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01897, 47-051-01898, 47-051-01899, 47-051-01900, 47-051-01901, 47-051-01902 and 47-051-01913. The Office of Oil and Gas hereby **ORDERS** that Chevron Appalachia, LLC shall meet the following site construction and operational requirements for the Hicks Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland W-02 shall have two layers of thirty-inch (30”) silt fence to prevent any sediment from reaching the wetland or stream from the well pad and adjacent tank pad. Orange construction fence also delineates the LOD boundary near the wetland to minimize the change of disturbance.
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.



Thus ORDERED, the 22nd day of February, 2017.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF

HICKS WETLAND WAIVER - ATTACHMENT 1



SITE LOCATION MAP  
USGS MOUNDSVILLE & GLEN EASTON QUADS  
1" = 2000'

- NOTES:**
1. THE UNDERGROUND UTILITIES SHOWN ON HERE HAVE BEEN PHYSICALLY LOCATED BY SURVEY. THE 811 CALL #815(248)65 WAS COMPLETED ON MAY 26, 2016. NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. OTHER IN SERVICE OR ABANDONED PLAN PROVIDED FOR REFERENCE ONLY. MICHAEL BAKER INTERNATIONAL DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.
  2. EXISTING TOPOGRAPHICAL DATA PROVIDED FROM BLUE MOUNTAIN SURVEY DATED MARCH 27, 2016, BASED ON NAD 83 WEST VIRGINIA STATE PLANE, NORTH ZONE, U.S. FOOT.
  3. ENVIRONMENTAL SCREENING PERFORMED ON APRIL 28, 2016 BY MICHAEL BAKER INTERNATIONAL.
  4. GRADE ALL CHANNELS TO PROVIDE POSITIVE FLOW TO THE OUTFALL.
  5. ROCK FILTERS BELOW CROSS DRAINS TO BE CONSTRUCTED PER DETAIL.
  6. SIX INCHES OF TOPSOIL SHALL BE PLACED ON ALL FINAL SLOPES PRIOR TO FINAL STABILIZATION.
  7. STOCKPILE VOLUME INCLUDES 4,000 CY FOR FUTURE FACILITIES WORK.
  8. WELL PAD FILLS
    - A. FILLS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM D 698)
    - B. MAXIMUM LIFT THICKNESS FOR FILLS WILL BE 6"
    - C. FILL SHALL BE FREE OF OBJECTIONABLE MATERIAL NOTHING LARGER THAN 4"
    - D. ROCK FILL LIFTS SHALL NO THICKER THAN 16"
  9. COLLARS FOR WELLS WITH THROUGH WITH WILL BE INSTALLED DURING THE INITIAL SITE CONSTRUCTION. THE REMAINING COLLARS WILL BE INSTALLED AS THE DRILLING PROGRAM PROGRESSES.

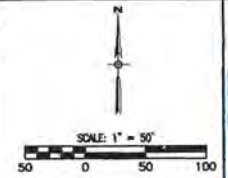
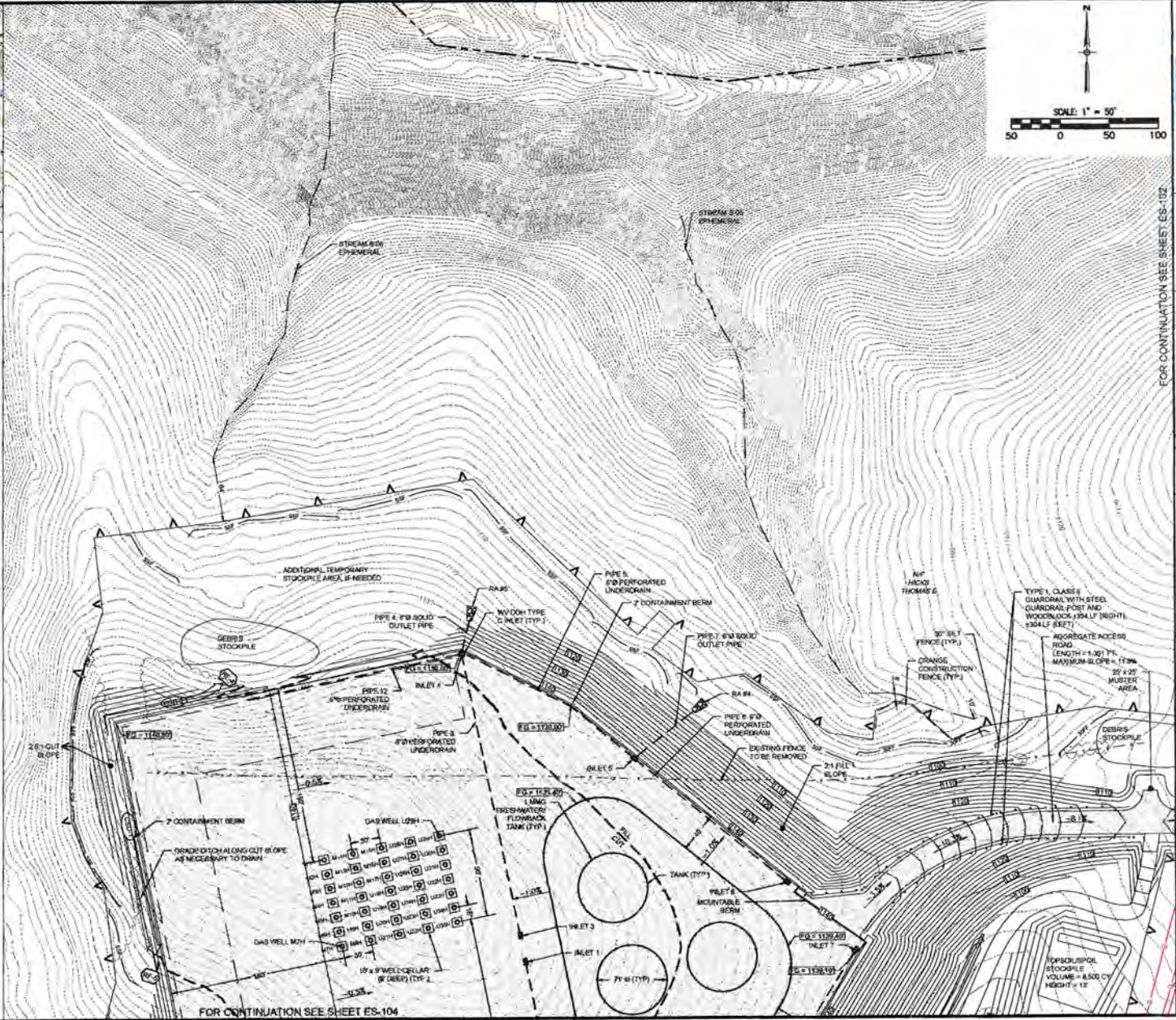
TOTAL AREA = 27.4 ACRES  
DISTURBED AREA = 27.4 ACRES



Know what's below  
Call before you dig

EROSION & SEDIMENT CONTROL LEGEND

- LIMITS OF DISTURBANCE/PROJECT LIMIT
- 18" SILT FENCE
- 30" SILT FENCE
- SUPER SILT FENCE
- ORANGE CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- ROCK FILTER
- RIP RAP APRON
- TEMPORARY INTERCEPTOR CHANNEL
- ACCESS ROAD CHANNEL
- CUT SLOPE DITCH



Michael Baker  
INTERNATIONAL  
MICHAEL BAKER INTERNATIONAL  
CONSULTING ENGINEERS  
HOCOT TOWNSHIP, PENNSYLVANIA



FOR CONTINUATION SEE SHEET ES-102

NO.	DATE	REVISION RECORD
01	12-28-2016	01 - REVISED PER MW DEP COMMITTEE
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		

HICKS WELL PAD  
FOR CLAY ROAD, C.R. 17  
PREPARED FOR:  
**CHEVRON APPALACHIA, LLC**  
800 MOUNTAIN VIEW DRIVE  
SMITHFIELD, PA 15878

EROSION AND SEDIMENT CONTROL PLAN  
Project Number: 150818  
Drawing Scale: AS SHOWN  
Date Issued: 03.15.2018  
Under Number:  
Drawn By: JLC  
Checked By: JLC  
Project Manager: TMP  
ES 103



HICKS WETLAND WAIVER - ATTACHMENT 1



SITE LOCATION MAP  
USGS MOUNDSVILLE & GLEN EASTON QUADS  
1" = 2000'

- NOTES
- THE UNDERGROUND UTILITIES SHOWN ON HERE HAVE BEEN PHYSICALLY LOCATED BY SURVEY. THE 811 CALL (811/246466) WAS COMPLETED ON MAY 28, 2016. NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. PLAN PROVIDED FOR REFERENCE ONLY. MICHAEL BAKER INTERNATIONAL DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.
  - EXISTING TOPOGRAPHICAL DATA PROVIDED FROM BLUE MOUNTAIN SURVEY DATED MARCH 27, 2016, BASED ON NAD 83 WEST VIRGINIA STATE PLANE, NORTH ZONE, U.S. FOOT.
  - ENVIRONMENTAL SCREENING PERFORMED ON APRIL 28, 2016 BY MICHAEL BAKER INTERNATIONAL.
  - GRADE ALL CHANNELS TO PROVIDE POSITIVE FLOW TO THE OUTFALL.
  - ROCK FILTERS BELOW CROSS DRAINS TO BE CONSTRUCTED PER DETAIL.
  - SIX INCHES OF TOPSOIL SHALL BE PLACED ON ALL FINAL SLOPES PRIOR TO FINAL STABILIZATION.
  - STOCKPILE VOLUME INCLUDES 4,500 CY FOR FUTURE FACILITIES WORK.
  - WELL PAD FILLS:
    - FILLS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY (ASTM D-698).
    - MAXIMUM LIFT THICKNESS FOR FILLS WILL BE 4".
    - FILL SHALL BE FREE OF OBJECTIONABLE MATERIAL NOTHING LARGER THAN 4".
    - ROCK FILL LIFTS SHALL NOT THICKER THAN 18".
  - CELLARS FOR WELLS WITH THROUGH HOUSING WILL BE INSTALLED DURING THE INITIAL SITE CONSTRUCTION. THE REMAINING CELLARS WILL BE INSTALLED AS THE DRILLING PROGRAM PROGRESSES.

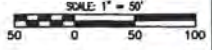
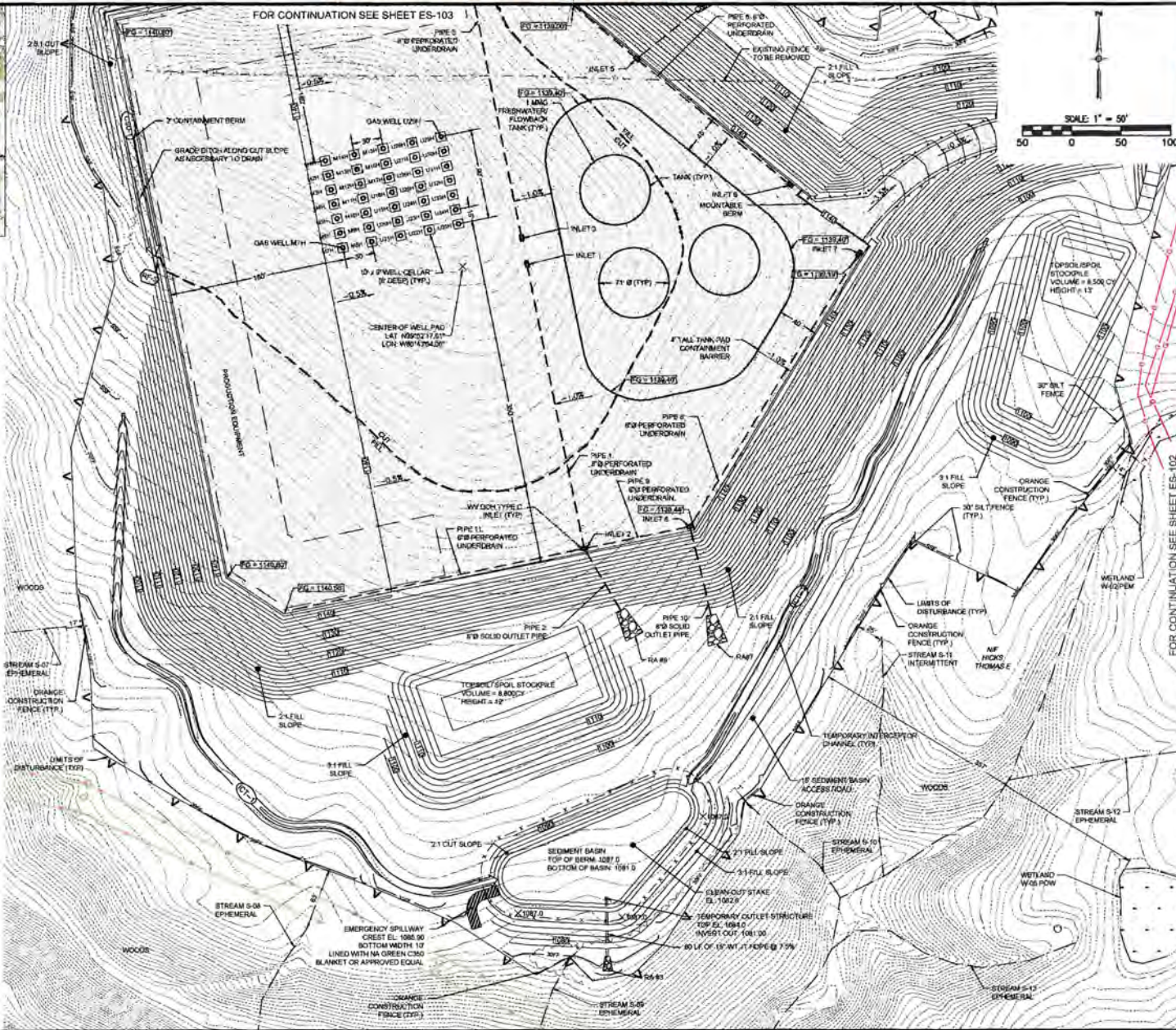
TOTAL AREA = 27.4 ACRES  
DISTURBED AREA = 27.4 ACRES



Know what's below  
Call before you dig

EROSION & SEDIMENT CONTROL LEGEND

- LIMITS OF DISTURBANCE/PROJECT LIMIT
- 18" SILT FENCE
- 30" SILT FENCE
- SUPER SILT FENCE
- ORANGE CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- ROCK FILTER
- RIP RAP APRON
- TEMPORARY INTERCEPTOR CHANNEL
- ACCESS ROAD CHANNEL
- OUT SLOPE DITCH



**Michael Baker INTERNATIONAL**  
MICHAEL BAKER INTERNATIONAL  
CONSULTING ENGINEERS  
1800 TOWNSHIP, PENNSYLVANIA

DATE	REVISION	RECORD
01/23/16	01	REVISED PER W/307 COMMENTS
02/01/16	02	
02/01/16	03	
02/01/16	04	
02/01/16	05	
02/01/16	06	
02/01/16	07	
02/01/16	08	

FOR CONTINUATION SEE SHEET ES-102

**HICKS WELL PAD**  
FORK RIDGE ROAD - C.R. 17  
CLAY DISTRICT, MARSHALL COUNTY

**CHEVRON APPALACHIA, LLC**  
800 MOUNTAIN VIEW DRIVE  
SMITHFIELD, PA 15787

EROSION AND SEDIMENT CONTROL PLAN

Project Number: 10216  
Drawing Scale: AS SHOWN  
Date Issued: 10-13-2016  
Drawn By: JJC  
Checked By: EJA  
Project Manager: TSC

**ES 104**





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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: XTO Energy, Inc  
810 Houston Street  
Fort Worth, TX 76102

DATE: February 24, 2017  
ORDER NO.: 2017-W-5

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to XTO Energy, Inc (hereinafter "XTO" or "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. XTO is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 810 Houston Street, Fort Worth, TX 76102
3. On September 21, 2016 and October 11, 2016, XTO submitted well work permit applications identified as API# 47-049-02420, 47-049-02422 and 47-049-02423. The proposed wells are to be located on the Worthington Pad in Lincoln District of Marion County, West Virginia.
4. On September 21, 2016, XTO requested a waiver for Wetland WL-11 as outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API# 47-049-02420, 47-049-02422 and 47-049-02423.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland WL-11 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-049-02420, 47-049-02422 and 47-049-02423. The Office of Oil and Gas hereby **ORDERS** that XTO shall meet the following site construction and operational requirements for the Worthington Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland WL-11 shall have two layers of twenty-four-inch (24”) compost filter sock that will prevent any sediment from reaching the wetland.
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.



Thus ORDERED, the 24th day of February, 2017.

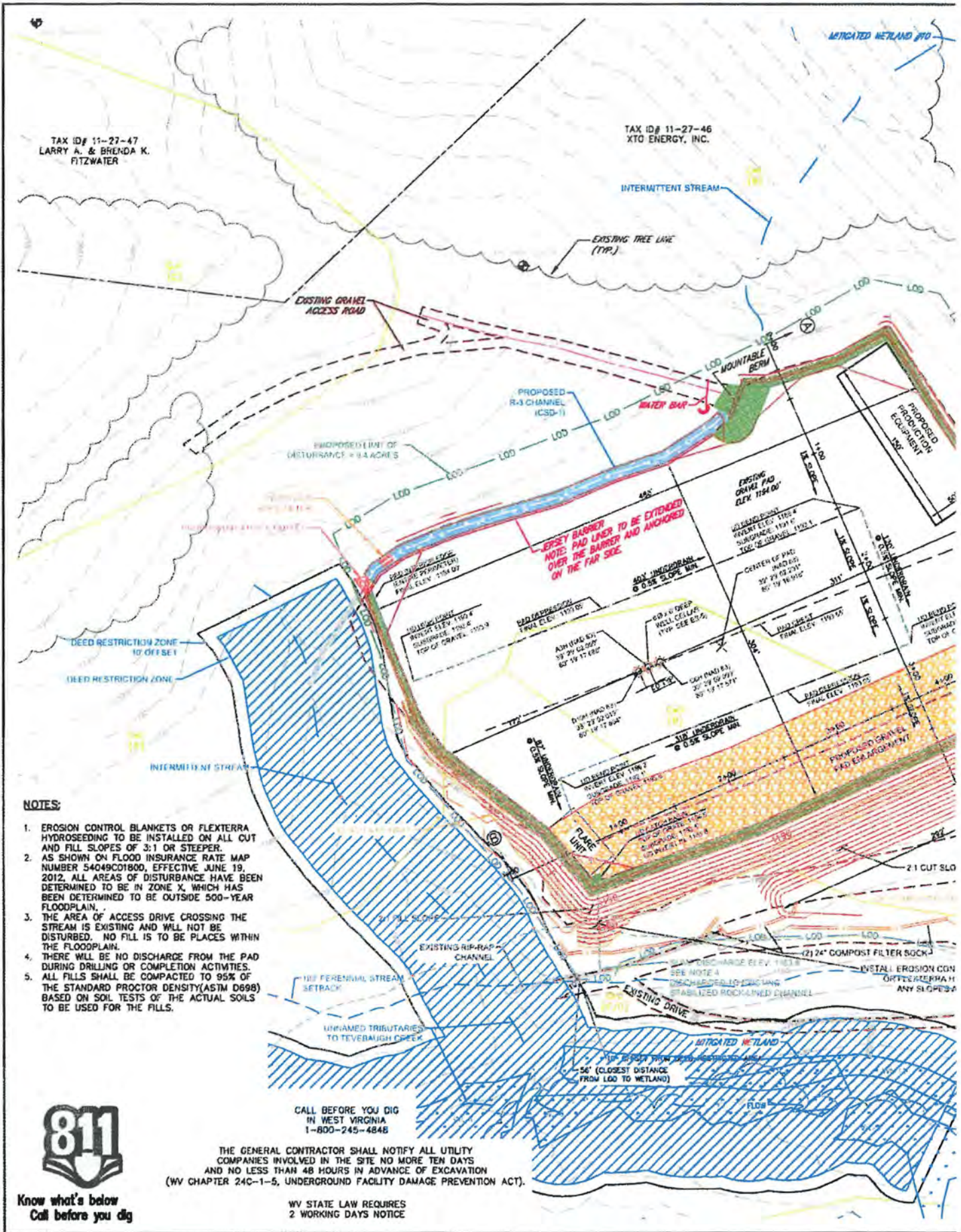
IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:



JAMES A. MARTIN, CHIEF



**NOTES:**

1. EROSION CONTROL BLANKETS OR FLEXITERRA HYDROSEEDING TO BE INSTALLED ON ALL CUT AND FILL SLOPES OF 3:1 OR STEEPER.
2. AS SHOWN ON FLOOD INSURANCE RATE MAP NUMBER 54049C01800, EFFECTIVE JUNE 19, 2012, ALL AREAS OF DISTURBANCE HAVE BEEN DETERMINED TO BE IN ZONE X, WHICH HAS BEEN DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN.
3. THE AREA OF ACCESS DRIVE CROSSING THE STREAM IS EXISTING AND WILL NOT BE DISTURBED. NO FILL IS TO BE PLACES WITHIN THE FLOODPLAIN.
4. THERE WILL BE NO DISCHARGE FROM THE PAD DURING DRILLING OR COMPLETION ACTIVITIES.
5. ALL FILLS SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY (ASTM D698) BASED ON SOIL TESTS OF THE ACTUAL SOILS TO BE USED FOR THE FILLS.



Know what's below  
Call before you dig

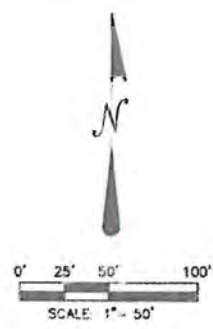
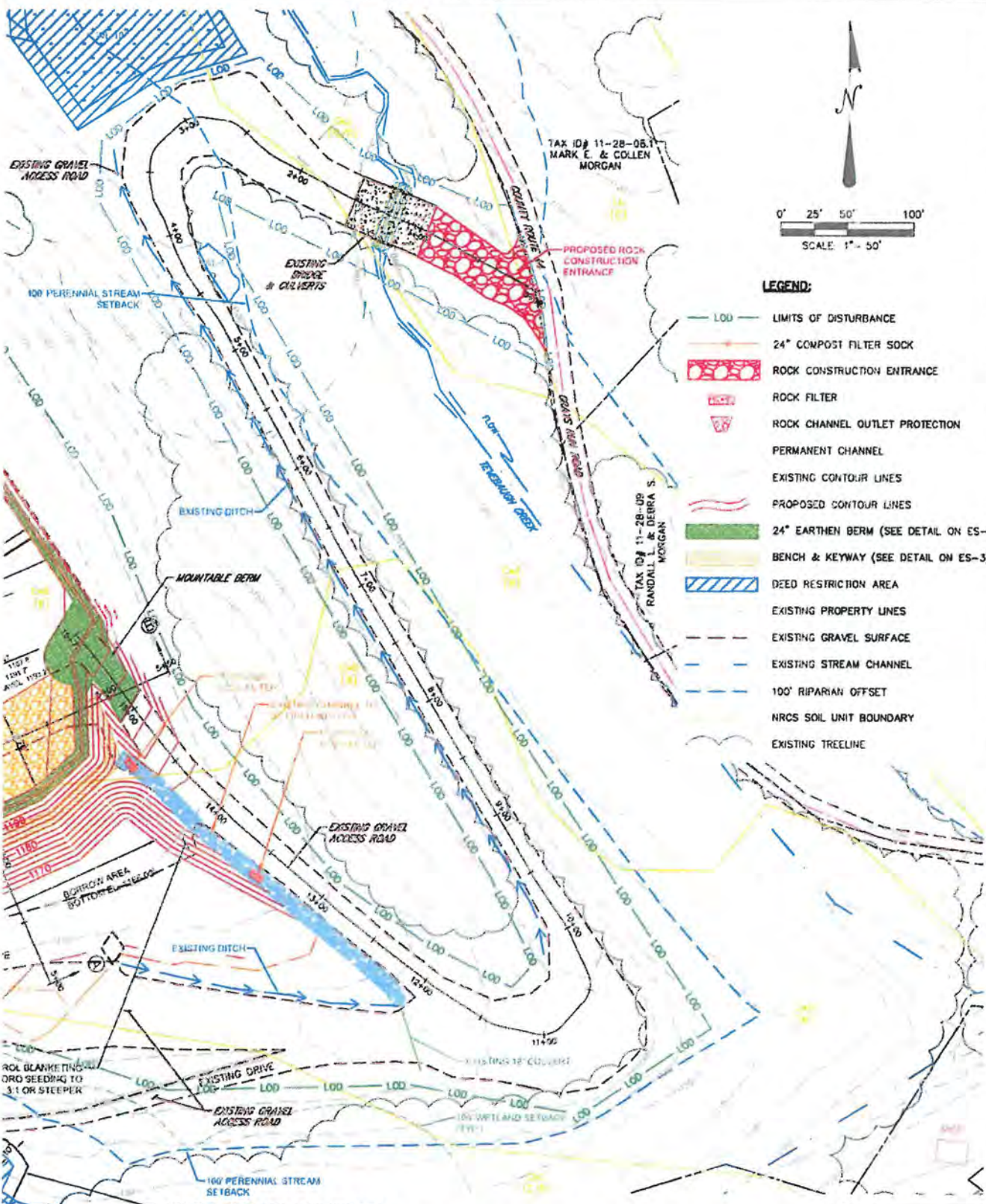
CALL BEFORE YOU DIG  
IN WEST VIRGINIA  
1-800-245-4848

THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN 48 HOURS IN ADVANCE OF EXCAVATION (WV CHAPTER 24C-1-5, UNDERGROUND FACILITY DAMAGE PREVENTION ACT).

WV STATE LAW REQUIRES  
2 WORKING DAYS NOTICE



Wetland Waiver - Attachment 1



- LEGEND:**
- LOU LIMITS OF DISTURBANCE
  - 24" COMPOST FILTER SOCK
  - █ ROCK CONSTRUCTION ENTRANCE
  - █ ROCK FILTER
  - █ ROCK CHANNEL OUTLET PROTECTION
  - PERMANENT CHANNEL
  - EXISTING CONTOUR LINES
  - PROPOSED CONTOUR LINES
  - █ 24" EARTHEN BERM (SEE DETAIL ON ES-4)
  - █ BENCH & KEYWAY (SEE DETAIL ON ES-3)
  - █ DEED RESTRICTION AREA
  - EXISTING PROPERTY LINES
  - EXISTING GRAVEL SURFACE
  - EXISTING STREAM CHANNEL
  - 100' RIPARIAN OFFSET
  - NRCS SOIL UNIT BOUNDARY
  - EXISTING TREELINE

REVISION BY:	DATE:	DESCRIPTION:

DESIGNED BY: DRI  
 REVIEWED BY: MAY  
 DRAWN BY: DRI  
 DATE SEPT. 2016  
 PROJ. NO.: 1837.195  
 DRAWING NO.:

**M/A**  
**Morris Knowles & Associates, Inc.**  
 Consulting Engineers and Land Surveyors  
 443 JORDAN ROAD  
 TEMPE, AZ 85283  
 PHONE: (480) 488-4422  
 FAX: (480) 488-8849

**WORTHINGTON WELL SITE**  
 prepared for  
**XTO ENERGY, INC.**  
 situated at  
 LINCOLN DISTRICT, MARION COUNTY, WEST VIRGINIA  
**EROSION AND SEDIMENT CONTROL PLAN**

MORRIS KNOWLES & ASSOCIATES, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR MANIPULATED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT PERMISSION AND CONSENT OF MORRIS KNOWLES & ASSOCIATES, INC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.



DRAWING NO.  
 SHEET NO.  
 ES-3





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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Chevron Appalachia, LLC  
P.O. Box 611  
Moon Township, PA 15108

DATE: March 2, 2017  
ORDER NO.: 2017-W-6

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Chevron Appalachia, LLC (hereinafter "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Chevron Appalachia, LLC is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as P.O. Box 611, Moon Township, Pennsylvania.
3. On December 1, 2016, Chevron Appalachia, LLC submitted well work permit applications identified as API#s 47-051-01903 and 47-051-01904. Then on January 24, 2017, Chevron Appalachia, LLC also submitted well work permit applications identified as API#s 47-051-01914, 47-051-01916 and 47-051-01917. The five proposed wells are to be located on the Longworth Pad in Clay District of Marshall County, West Virginia.
4. On December 1, 2016 and January 24, 2017, Chevron Appalachia, LLC requested a waiver for Wetlands 2A, 2B, 3, 4B and 4D outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01903, 47-051-01904, 47-051-01914, 47-051-01916 and 47-051-01917. Wetland 2A and 4D will be excluded from this waiver. Wetland 2A will be covered under the 404-permit due to its impact. Wetland 4D is outside the area of the pad LOD.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetlands 2B, 3 and 4B from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01903, 47-051-01904, 47-051-01914, 47-051-01916 and 47-051-01917. The Office of Oil and Gas hereby **ORDERS** that Chevron Appalachia, LLC shall meet the following site construction and operational requirements for the Longworth Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland 2B, 3 and 4B shall have both a compost filter sock trap and a thirty-two (32”) compost filter sock to prevent sediment from reaching the wetlands.
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.



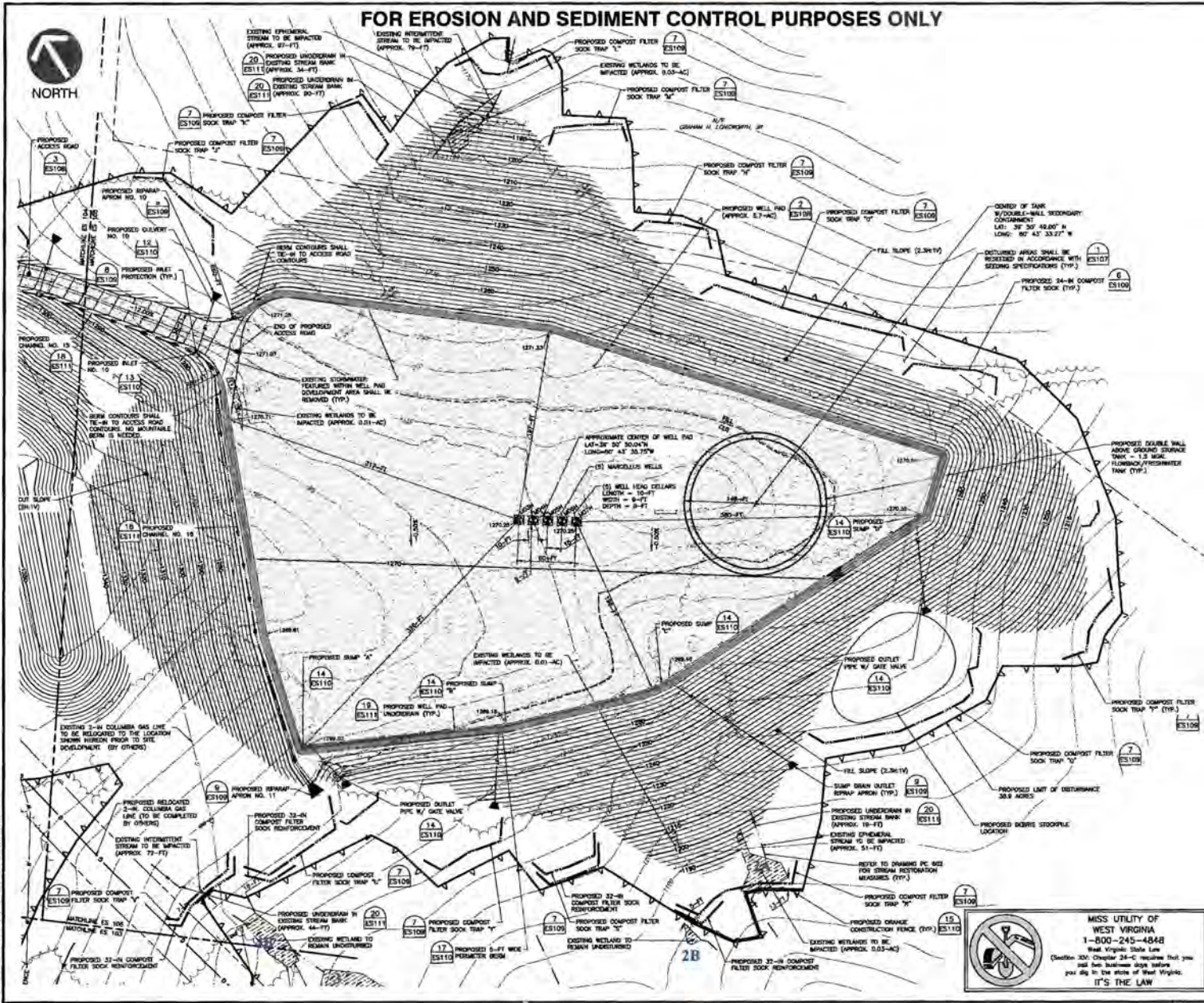
Thus ORDERED, the 27th day of February, 2017.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF

# FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY



**LEGEND**



**CEL**  
CEL Environmental Consultants, LLC  
4600 Triangle Lane, Suite 300 • Export, PA 15622  
724.237.2399 404-949-9419



NO.	DATE	REVISION RECORD
1	05/20/2018	REVISED FOR CONSTRUCTION AND EROSION CONTROL PURPOSES
2	05/20/2018	REVISED FOR WADOLINE COMMENTARY IN PLAN
3	06/14/2018	
4	06/14/2018	
5	06/14/2018	
6	06/14/2018	
7	06/14/2018	

**LONGWORTH WELL SITE**  
CLAY DISTRICT  
MARSHALL COUNTY, WEST VIRGINIA  
PREPARED FOR:  
**CHEVRON APPALACHIA, LLC**  
800 MOUNTAIN VIEW DRIVE  
SMITHFIELD, PA 15475

**EROSION AND SEDIMENT CONTROL PLAN (5 OF 5)**

Project Number: 161-241-0006  
Drawing Scale: 1" = 100'  
Sheet Number: 1020/2716  
Utility File:  
Drawn By: JSM  
Checked By: JSM  
Project Manager: JSM

SCALE IN FEET  
0 50 100

**ES 105**

**REFERENCES**

- TOPOGRAPHY DEVELOPED FROM AN UNMANNED AERIAL VEHICLE (UAV) FLIGHT CONDUCTED BY ONE & ORTHOPHOTIC CONSULTANTS, INC. DATED 05/13/2016.
- PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.
- STREAMS AND WETLANDS DELINEATED BY ONE & ORTHOPHOTIC CONSULTANTS, INC. DATED 04/22/2016.
- UNDERGROUND UTILITIES LOCATED BY A GEOTECHNICAL SURVEY CONDUCTED BY SRS GEOTECHNICAL, LTD. DATED 04/18/2018 TO 04/22/2018.
- WARRANTED UTILITY FEATURES SUPPLIED BY ONE & ORTHOPHOTIC CONSULTANTS, INC. DATED 04/18/2018 AND 06/18/2018.

**MISS UTILITY OF WEST VIRGINIA**  
1-800-245-4848  
West Virginia State Law  
(Section 200-C Chapter 28-C requires that you call two business days before you dig in the state of West Virginia.)  
**IT'S THE LAW**





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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

**TO:** Mountaineer Keystone, LLC  
6031 Wallace Road Extension, Suite 300  
Wexford, PA 15090

**DATE:** February 24, 2017  
**ORDER NO.:** 2017-W-7

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Mountaineer Keystone, LLC (hereinafter "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Mountaineer Keystone, LLC is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 6031 Wallace Road Extension, Suite 300, Wexford, Pennsylvania.
3. On December 8, 2016 Mountaineer Keystone, LLC submitted well work permit applications identified as API#s 47-033-05885, 47-033-05886, 47-033-05887 and 47-033-05888. The proposed wells are to be located on the Goff 5-55 Pad in Clark District of Harrison County, West Virginia.
4. On December 1, 2016, Mountaineer Keystone, LLC requested a waiver for Wetlands WL 5, WL 6, WL 7, WL 10, WL 11, WL 17, WL 18 and WL 19 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-033-05885, 47-033-05886, 47-033-05887 and 47-033-05888. Wetlands WL 18 and WL 19 are excluded from the waiver.



## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to...(3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetlands WL 5, WL 6, WL 7, WL 10, WL 11 and WL 17 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-033-05885, 47-033-05886, 47-033-05887 and 47-033-05888. The Office of Oil and Gas hereby **ORDERS** that Mountaineer Keystone, LLC shall meet the following site construction and operational requirements for the Goff 5-55 Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland WL 5, WL 6, WL 7 and WL 17 are all at the top of the cut slope. Diversion ditches will be used to redirect excess water away from the pad.
- d. Wetland WL 10 and WL 11 are up slope from the access road adjoining the pad, road side ditches will redirect any water from the road down slope away from the wetland.
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- l. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 24th day of February, 2017.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

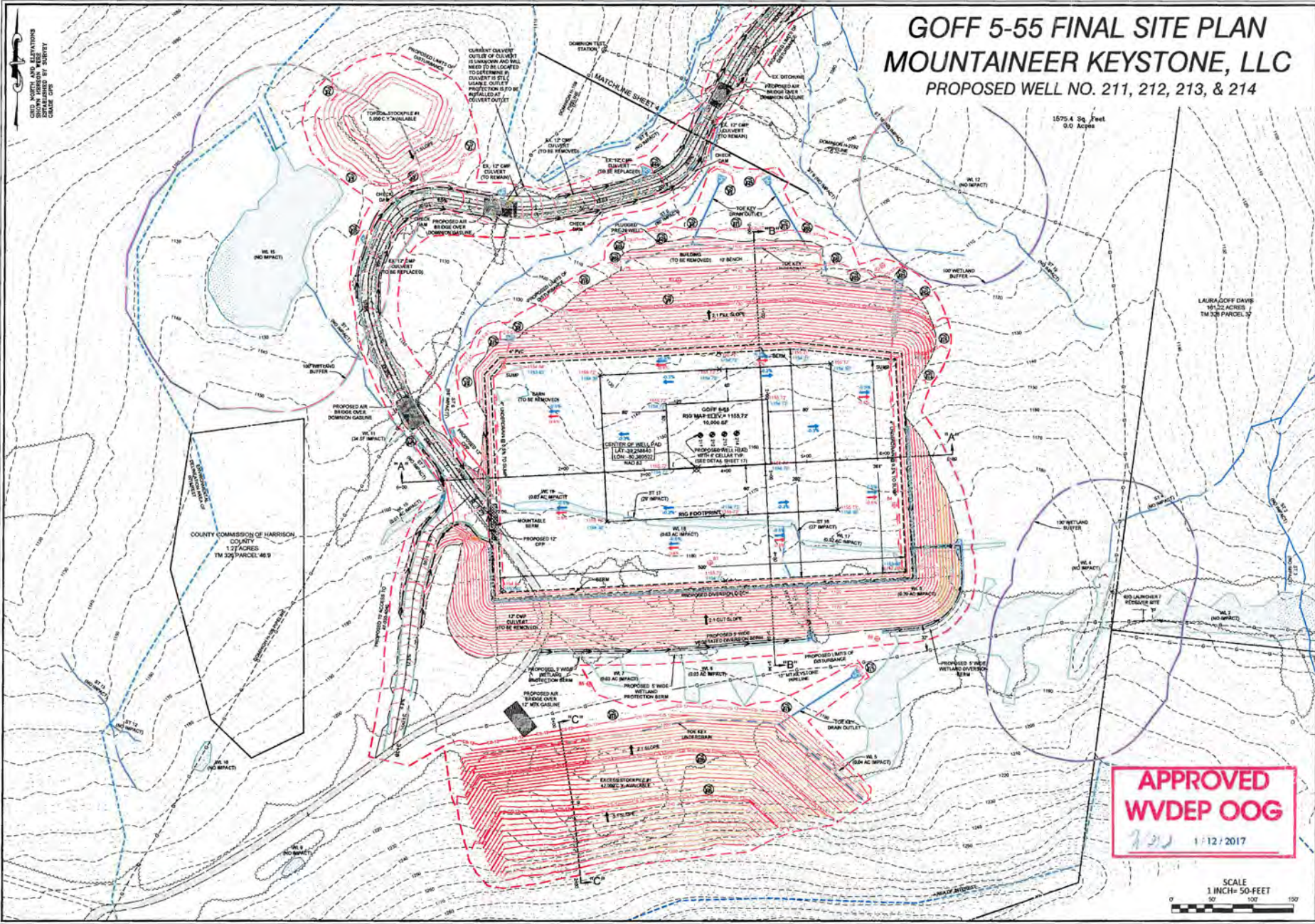
By:



JAMES A. MARTIN, CHIEF



# GOFF 5-55 FINAL SITE PLAN MOUNTAINEER KEYSTONE, LLC PROPOSED WELL NO. 211, 212, 213, & 214



**APPROVED  
WVDEP OOG**  
300 1/12/2017



THIS DOCUMENT WAS  
PREPARED BY: SMITH  
LAND SURVEYING  
FOR: MOUNTAINEER  
KEYSTONE, LLC

**GOFF 5-55  
SITE PLAN**  
CLARK DISTRICT  
HARRISON COUNTY, WV

DATE: 6-24-16  
SCALE: 1" = 50'  
DESIGNED BY: OES  
FILE NO: 8532  
SHEET: 5 OF 19  
REV: 12-05-2016





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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: EQT Production Company  
115 Professional Place P.O. Box 280  
Bridgeport WV, 26330

DATE: August 10, 2017  
ORDER NO.: 2017-W-8

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to EQT Production Company (hereinafter "EQT" or "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. EQT is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 115 Professional Place, P.O. Box 280, Bridgeport, West Virginia.
3. On January 3, 2017, EQT submitted a well work permit application identified as API# 47-085-10308. The proposed well is to be located on the PUL 65 Pad in Union District of Ritchie County, West Virginia.
4. On January 4, 2017, Kleinfelder, Inc. (on behalf of EQT) requested a waiver for KLF-Wetland 10 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-085-10308.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”



## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for KLF-Wetland10 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-085-10308. The Office of Oil and Gas hereby **ORDERS** that EQT shall meet the following site construction and operational requirements for the PUL 65 well pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. KLF-Wetland 10 shall have double layers of twenty-four inch (24”) compost filter sock that will prevent any sediment from reaching the wetland from the well pad.
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

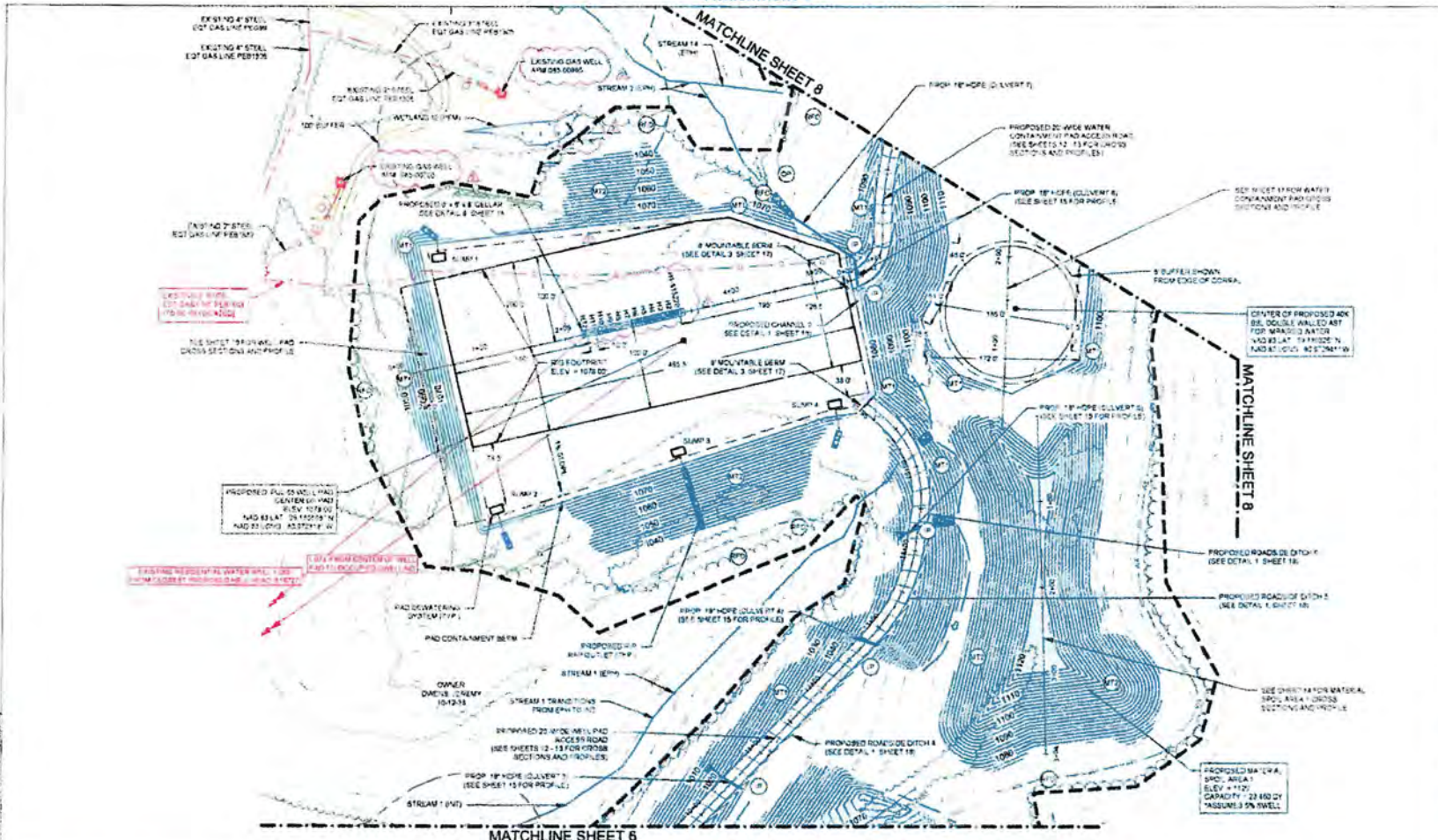
Thus ORDERED, the 10th day of August, 2017.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF

Attachment 1



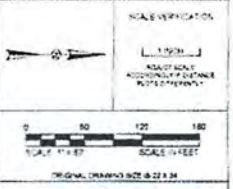
**KLEINFELDER**  
*Right People. Right Solutions.*

200 EAST MAIN STREET, SUITE 102  
 CHARLESTON, WEST VIRGINIA 25301  
 PHONE: 304.703.7000  
 WWW.KLEINFELDER.COM

PROJECT NO. 17-001  
 DATE: 7/18/2017  
 DRAWN BY: TROY B. DANIEL  
 PER: 25643

REV.	DESCRIPTION	DATE
1	DATE REQUIREMENTS	07/11/2017
2	WELL HEADS DATA	07/11/2017
3	WATER DEMANDS	07/11/2017

**ISSUED FOR PERMITTING**



**SITE PLAN**  
 PUL-85 WELL PAD  
 RITCHIE COUNTY UNION DISTRICT  
 WEST VIRGINIA

**EQT**  
 Where energy meets innovation.

**PERMITTING**

PROJECT NO.	17-001
ISSUE DATE	7/18/2017
CURRENT REVISION	
DESIGNED BY	TDN
DRAWN BY	TDN
CHECKED BY	TDN
APPROVED BY	TDN

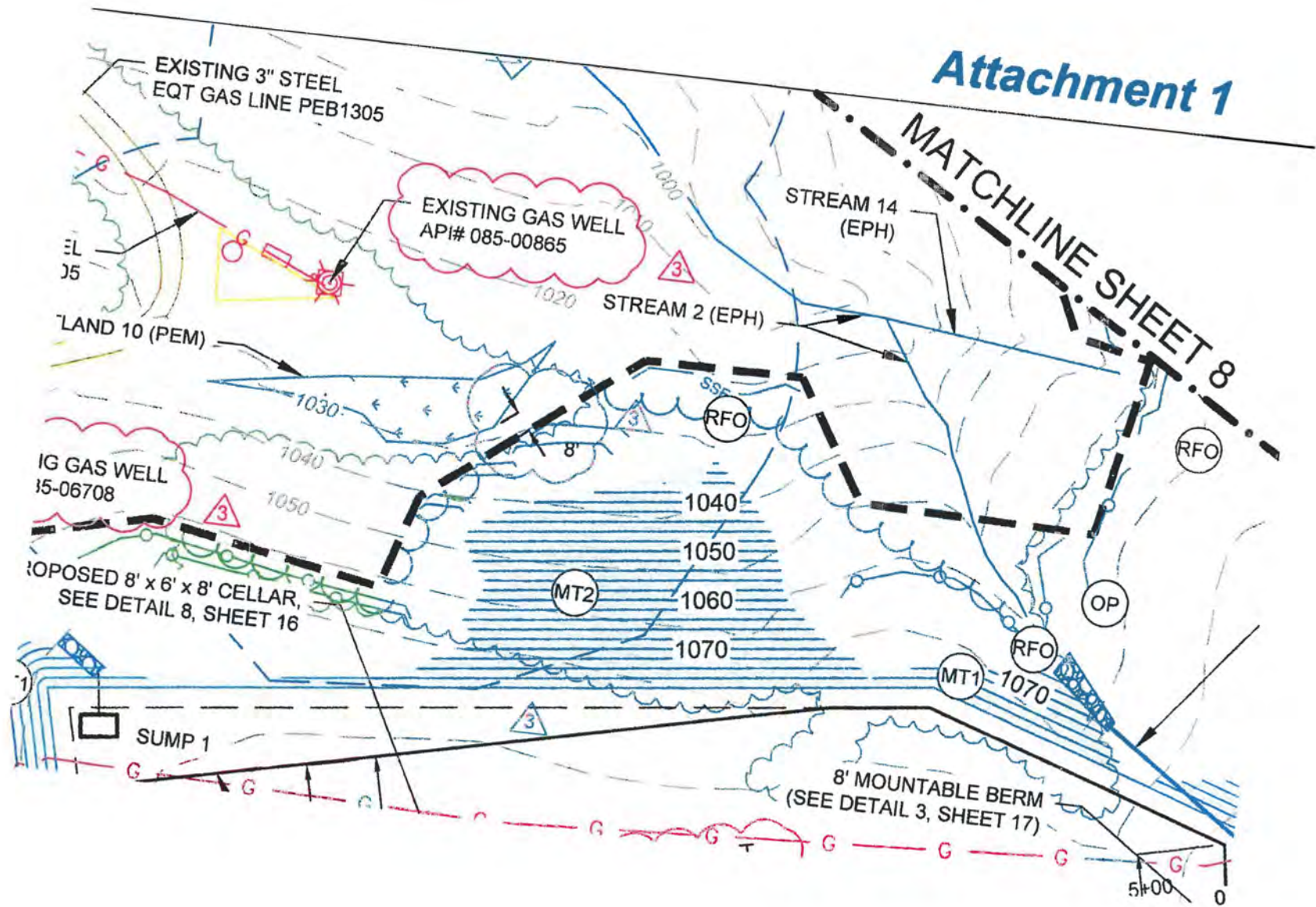
7

- NOTES**
- THE GRADE SHOWN REPRESENTS FINISHED GRADE ELEVATIONS.
  - PIPE MATERIALS SHALL BE AS NOTED ON THIS PLAN AND IN THE STORM DRAINAGE COMPUTATION ON SHEET 4.
  - CUT AND FILL SLOPES SHALL BE AT 2H:1V UNLESS NOTED OTHERWISE.
  - FILL SHALL BE PLACED IN 12" LIFTS AND BE COMPACTED TO 90% STANDARD PROCTOR DENSITY.
  - INTERMEDIATE HOARDING BRIMSHALS SHALL BE INSTALLED ON FULL SLOPES PER (SEE TECHNICAL DETAIL 4 SHOWN ON SHEET 2).
  - ALL FILL SLOPES SHALL BE TOP KEYS PER DETAIL 6 ON SHEET 2.
  - PROVIDE AND MAINTAIN POSITIVE FLOW FROM PADS TO BUMPS. STORAGE AND MATERIALS REMOVED FROM THE PAD BUMPS SHALL BE PUMPED TO ON-SITE HOLDING STORAGE TANKS AND SUBSEQUENTLY REMOVED FROM SITE BY AN APPROVED COMMERCIAL VENDOR.
  - ALL STORMWATER CONVEYANCES ON THE SITE HAVE BEEN DESIGNED TO ACCOMMODATE THE 10-YEAR 1-MINUTE STORM EVENT.
  - SEE DETAIL 2, SHEET 18 FOR RIP RAP OUTLET PROTECTION AND SIZING AND DESIGN.
  - CONSTRUCTION TO INSTALL ROCK CHECK DAMS WITH ROADSIDE DITCHES. SEE DETAIL 3 ON SHEET 19 FOR DITCHES. ROCK CHECK DAMS WILL BE INSTALLED USING CONCRETE BLOCKS AS SHOWN IN TECHNICAL DETAILS AND REMAIN IN PLACE AS PERMANENT CHECK DAMS AFTER CONSTRUCTION IS COMPLETE.
  - FILTER BOOK AND SUPER SALT FENCE SIZING TABLES ARE SHOWN IN DETAIL 1, 3, 5 ON SHEET 20.
  - IN TOPSOIL PLACEMENT AREAS, CONTRACTOR TO INSTALL PROPER BMP'S TO ENSURE NO OFF-SITE DITCHES OR SEDIMENTATION RUNOFF.
  - INSTALL ROCK FILTER DITCHES ALONG SEDIMENT BARRIERS AS SHOWN AND AT LOW POINTS AS SHOWN ON THIS PLAN.
  - REFER TO DETAIL 1, SHEET 19 FOR DITCH DETAILS.
  - SURFACE TRACKING SHALL BE INSTALLED ON FULL SLOPES AT INTERVALS OF 50' HORIZONTAL FEET TO REMAIN WIDTH OR LESS AS SHOWN ON THIS PLAN. ADDITIONAL SURFACE TRACKING.
  - TOP OF SPILL AREA FILL SLOPES TO BE GRADDED AT A MINIMUM OF 4% FROM CENTER TO PROMOTE POSITIVE DRAINAGE.

**APPROVED**  
**WVDEP OOG**  
 120 7/18/2017



# Attachment 1





west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Chevron Appalachia, LLC  
800 Mountain View Drive  
Smithfield, PA 15478

DATE: August 14, 2017  
ORDER NO.: 2017-W-9

**INTRODUCTION**

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Chevron Appalachia, LLC (hereinafter "Chevron" or "Operator"), collectively the "Parties."

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Chevron is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 800 Mountain View Drive, Smithfield, Pennsylvania.
3. On April 24, 2017, Chevron submitted well work permit applications identified as API#s 47-051-01926, 47-051-01927, 47-051-01928, 47-051-01929, 47-051-01930, 47-051-01931, 47-051-01932 and 47-051-01933. The eight proposed wells are to be located on the Hines Pad in Washington District of Marshall County, West Virginia.
4. On April 24, 2017, Civil and Environmental Consultants, Inc. (CEC), on behalf of Chevron, requested a waiver for Wetlands 2A, 2B, 3A, and 3B outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01926, 47-051-01927, 47-051-01928, 47-051-01929, 47-051-01930, 47-051-01931, 47-051-01932 and 47-051-01933. Wetlands 3A and 3B will be excluded from this waiver due to being located outside the area of the pad LOD.



## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”



## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetlands 2A and 2B from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01926, 47-051-01927, 47-051-01928, 47-051-01929, 47-051-01930, 47-051-01931, 47-051-01932 and 47-051-01933. The Office of Oil and Gas hereby **ORDERS** that Chevron shall meet the following site construction and operational requirements for the Hines Well Pad:

- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland 2A shall have two layers of eighteen-inch (18”) compost filter sock trap to prevent sediment from reaching the wetlands.
- d. Wetland 2B shall have two layers of twenty-four inch (24”) compost filter sock trap to prevent sediment from reaching the wetlands.
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- l. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 14th day of August, 2017.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: \_\_\_\_\_



JAMES A. MARTIN, CHIEF







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west virginia department of environmental protection

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

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

**ORDER  
ISSUED UNDER  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: Ascent Resources – Marcellus, LLC  
3501 NW 63<sup>rd</sup> Street  
Oklahoma City, OK 73116

DATE: December 8, 2017  
ORDER NO.: 2017-W-10

**INTRODUCTION**

This Order (hereinafter “Order”) is issued by the Office of Oil and Gas (hereinafter “OOG”), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to Ascent Resources – Marcellus, LLC (hereinafter “Ascent” or “Operator”), collectively the “Parties.”

**FINDINGS OF THE CHIEF**

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. Ascent is a “person” as defined by W. Va. Code §22-6-1(n), with a corporate address as 3501 NW 63rd Street, Oklahoma City, Oklahoma.
3. On August 17, 2017, Ascent submitted well work permit applications identified as API#s 47-103-3206 and 47-103-3207. On September 11, 2017, Ascent submitted well work permit applications identified as API#s 47-103-3208, 47-103-3209 and 47-103-3210. The five proposed wells are to be located on the Hoge GRN WZ Pad in Green District of Wetzel County, West Virginia.
4. On September 11, 2017 Ascent requested a waiver for Wetlands 3 and 5 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-103-3206, 47-103-3207, 47-103-3208, 47-103-3209 and 47-103-3210.

## CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

## ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “[n]o 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. The Office of Oil and Gas grants the request for a waiver for Wetland 3 and 5 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-103-3206, 47-103-3207, 47-103-3208, 47-103-3209 and 47-103-3210. The Office of Oil and Gas hereby **ORDERS** that Ascent shall meet the following site construction and operational requirements for the Hoge GRN WZ Well Pad:

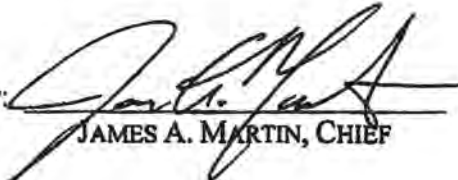
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland 3 shall have thirty two inch (32”) compost filter sock and super silt fencing to prevent sediment from reaching the wetlands.
- d. Wetland 5 shall have super silt fencing to prevent sediment from reaching the wetlands from the access road.
- e. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- f. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- g. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- h. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- i. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- j. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- k. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- l. All records from inspections shall be maintained on site for the life of the project and be available upon request.



Thus ORDERED, the 8th day of December, 2017.

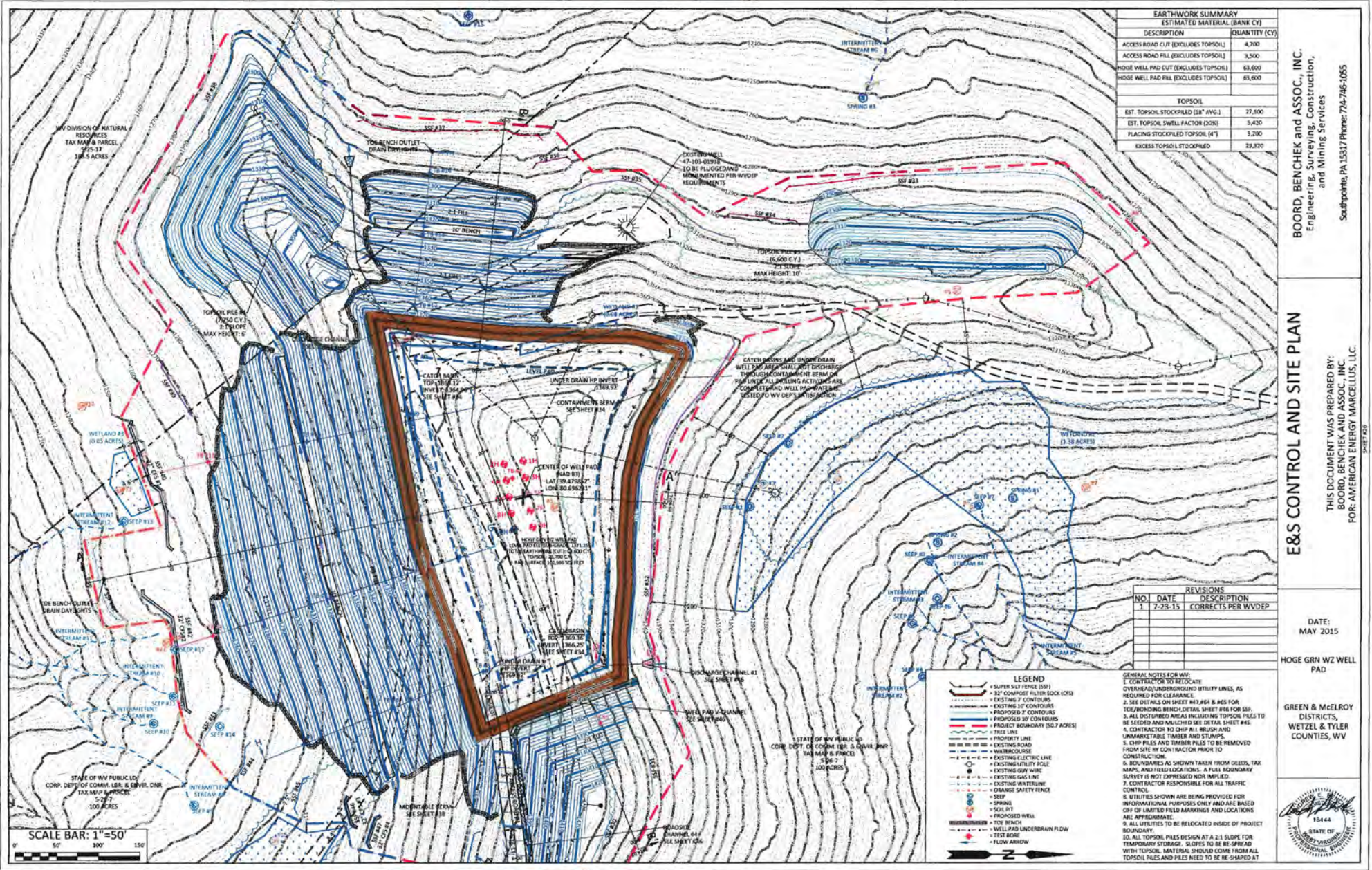
IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:   
JAMES A. MARTIN, CHIEF



Wetland Waiver - Exhibit "A" Page 1



EARTHWORK SUMMARY	
DESCRIPTION	QUANTITY (CY)
ACCESS ROAD CUT (EXCLUDES TOPSOIL)	4,700
ACCESS ROAD FILL (EXCLUDES TOPSOIL)	3,500
HOGE WELL PAD CUT (EXCLUDES TOPSOIL)	63,600
HOGE WELL PAD FILL (EXCLUDES TOPSOIL)	63,600
TOPSOIL	
EST. TOPSOIL STOCKPILED (18" AVG.)	27,100
EST. TOPSOIL SWELL FACTOR (20%)	5,420
PLACING STOCKPILED TOPSOIL (4")	3,200
EXCESS TOPSOIL STOCKPILED	29,320

BOORD, BENCHEK and ASSOC., INC.  
 Engineering, Surveying, Construction,  
 and Mining Services  
 Southpointe, PA 15317 Phone: 724-746-1055

E&S CONTROL AND SITE PLAN

THIS DOCUMENT WAS PREPARED BY:  
 BOORD, BENCHEK AND ASSOC., INC.  
 FOR: AMERICAN ENERGY MARCELLUS, LLC.

SHEET #2

REVISIONS		
NO.	DATE	DESCRIPTION
1	7-23-15	CORRECTS PER WVDEP

DATE: MAY 2015  
 HOGE GRN WZ WELL PAD

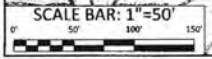
GREEN & MCELROY DISTRICTS, WETZEL & TYLER COUNTIES, WV



**LEGEND**

- 32" COMPOST FILTER SOCK (CFS)
- EXISTING 2" CONTOURS
- PROPOSED 2" CONTOURS
- PROPOSED 30' CONTOURS
- PROJECT BOUNDARY (50.7 ACRES)
- PROPERTY LINE
- EXISTING ROAD
- WATERCOURSE
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING GAS LINE
- EXISTING WATERLINE
- ORANGE SAFETY FENCE
- SEEP
- SPRING
- TEST BORE
- WELL PAD UNDERDRAIN FLOW
- TEST BORE
- FLOW ARROW

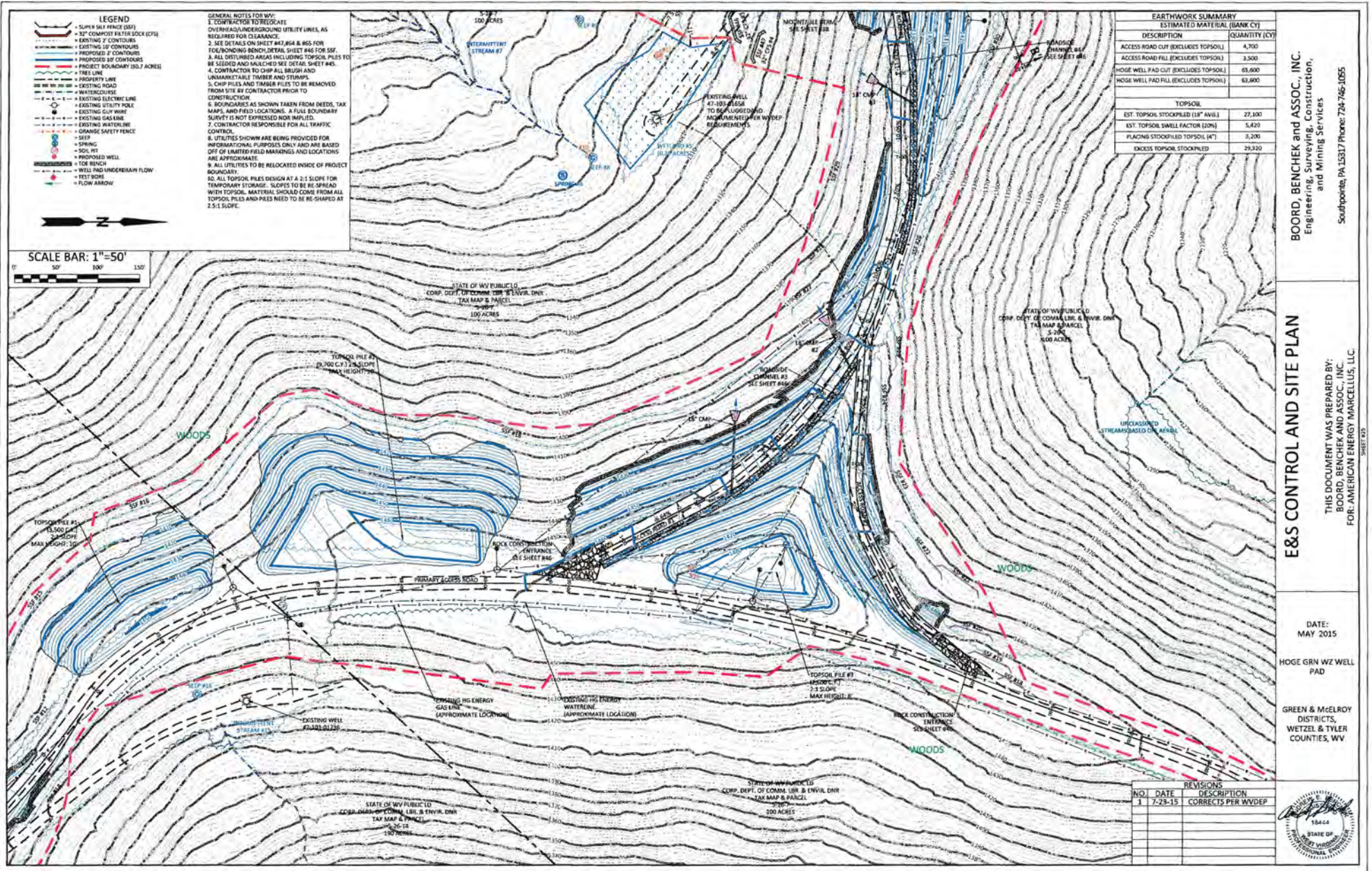
GENERAL NOTES FOR WV:  
 1. CONTRACTOR TO RELOCATE OVERHEAD UNDERGROUND UTILITY LINES, AS REQUIRED FOR CLEARANCE.  
 2. SEE DETAILS ON SHEET #1, #2 & #3 FOR TIE-IN/JOINING BENCH DETAILS. SHEET #46 FOR SSP.  
 3. ALL DISTURBED AREAS INCLUDING TOPSOIL PILES TO BE SEEDED AND MULCHED. SEE DETAIL SHEET #45.  
 4. CONTRACTOR TO CHIP ALL BRUSH AND UNMARKETABLE TIMBER AND STUMPS.  
 5. CHIP PILES AND TIMBER PILES TO BE REMOVED FROM SITE BY CONTRACTOR PRIOR TO CONSTRUCTION.  
 6. BOUNDARIES AS SHOWN TAKEN FROM DEEDS, TAX MAPS, AND FIELD LOCATIONS. A FULL BOUNDARY SURVEY IS NOT EXPRESSED NOR IMPLIED.  
 7. CONTRACTOR RESPONSIBLE FOR ALL TRAFFIC CONTROL.  
 8. UTILITIES SHOWN ARE BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED ON UNLIMITED FIELD MARKINGS AND LOCATIONS ARE APPROXIMATE.  
 9. ALL UTILITIES TO BE RELOCATED INSIDE OF PROJECT BOUNDARY.  
 10. ALL TOPSOIL PILES DESIGN AT A 2:1 SLOPE FOR TEMPORARY STORAGE. SLOPES TO BE SPREAD WITH TOPSOIL. MATERIAL SHOULD COME FROM ALL TOPSOIL PILES AND PILES NEED TO BE RE-SHAPED AT



STATE OF WV PUBLIC LD. CORP. DEPT. OF COMM. LAB. & ENVIR. DNR TAX MAP & PARCEL 506-7 100 ACRES



Wetland Waiver - Exhibit "A" Page 2



**BOORD, BENCHEK and ASSOC., INC.**  
 Engineering, Surveying, Construction,  
 and Mining Services  
 Southpointe, PA 15317 Phone: 724-746-1055

**E&S CONTROL AND SITE PLAN**

THIS DOCUMENT WAS PREPARED BY:  
 BOORD, BENCHEK AND ASSOC., INC.  
 FOR: AMERICAN ENERGY MARCELLUS, LLC.

DATE:  
 MAY 2015

HOGUE GRN WZ WELL PAD

GREEN & McELROY DISTRICTS,  
 WETZEL & TYLER COUNTIES, WV

