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 west virginia department of environmental protection
 

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

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

Friday, March 1, 2019  
 WELL WORK PERMIT  
 Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC  
 700 CHERRINGTON PARKWAY


CORAOPOLIS, PA 15108

Re: Permit approval for FREELAND M05H  
 47-051-02148-00-00

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

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

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

  
 James A. Martin  
 Chief

Operator's Well Number: FREELAND M05H  
 Farm Name: JOSEPH L. FREELAND ET UX  
 U.S. WELL NUMBER: 47-051-02148-00-00  
 Horizontal 6A New Drill  
 Date Issued: 3/1/2019

**PERMIT CONDITIONS 4705102148** 03/08/2019

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.

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**CONDITIONS**

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

API Number: \_\_\_\_\_ 03/08/2019

# PERMIT CONDITIONS 4705102148

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).



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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 24, 2019  
ORDER NO.: 2019-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 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 17, 2018, Chevron Appalachia, LLC submitted well work permit applications identified as API#s 47-051-02142, 47-051-02143, 47-051-02145, 47-051-02146, 47-051-02148, 47-051-02151, 47-051-02153 and 47-051-02154. The proposed wells are to be located on the Freeland Pad in Clay District of Marshall County, West Virginia.
4. On February 20, 2019, Chevron Appalachia, LLC requested a waiver for Wetlands 1A, 1B, 2 and 4 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 s 47-051-02142, 47-051-02143, 47-051-02145, 47-051-02146, 47-051-02148, 47-051-02151, 47-051-02153 and 47-051-02154.

**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**

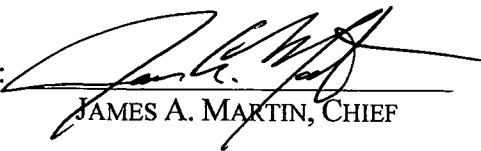
West Virginia Code §22-6A-12(b) requires, in part, that “[n]o well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetlands 1A 1B, 2 and 4 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s s 47-051-02142, 47-051-02143, 47-051-02145, 47-051-02146, 47-051-02148, 47-051-02151, 47-051-02153 and 47-051-02154. The Office of Oil and Gas hereby **ORDERS** that Chevron Appalachia, LLC shall meet the following site construction and operational requirements for the Freeland Well Pad:

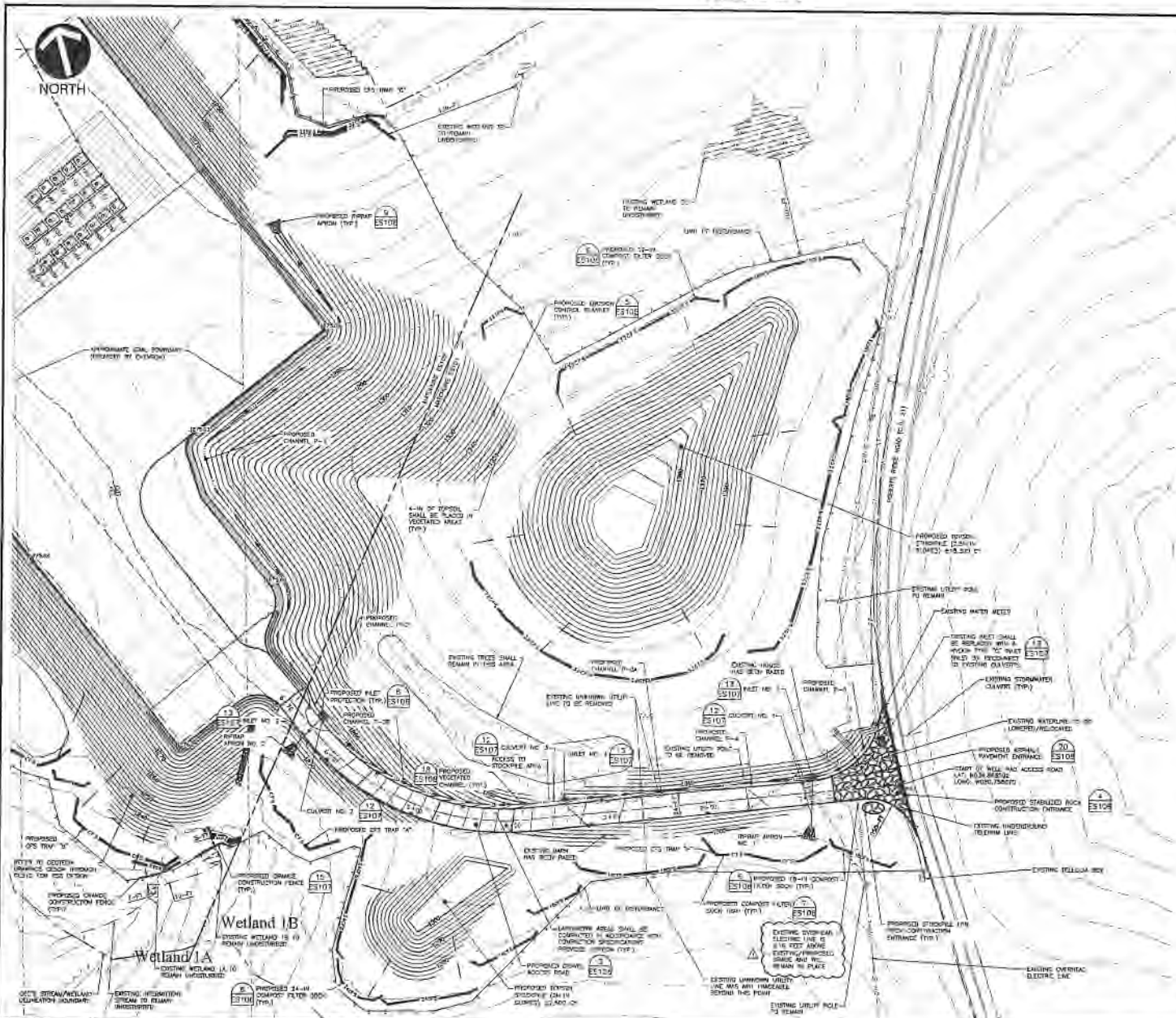
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland 1A, 1B and 2 shall have both a compost filter sock trap and a layer of thirty two-inch (32”) compost filter sock to prevent any sediment from reaching the wetland from the well pad. This along with rip-rap aprons, temporary and permanent vegetative cover will prevent sediment from reaching the wetland.
- d. Wetland 4 shall have a compost filter sock trap and a layer of thirty two-inch (32”) compost filter sock or a layer of eighteen-inch (18”) compost filter sock to prevent any sediment from reaching the wetland from the well pad. This along with temporary and permanent vegetative cover will prevent sediment from reaching 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, 2019.

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



**LEGEND**

- EXISTING PROPERTY LINE
- EXISTING ASPHALT DRIVEWAY
- EXISTING INTERMEDIATE (DITCH)
- EXISTING PAVED DRIVEWAY
- EXISTING GRAVEL DRIVEWAY
- EXISTING STRUCTURE/FOUNDATION
- EXISTING STREAM
- STREAM AND SPILLWAY DEMONSTRATION CHANNEL
- EXISTING NEARBY EXISTING CHANNEL
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING WATER MAIN
- EXISTING TELECOMMUNICATION LINE
- EXISTING SEWERAGE CHASE
- EXISTING TREE LINE
- EXISTING WATER METER
- EXISTING UTILITY POLE
- EXISTING FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED EDGE OF ACCESS ROAD/PAVEMENT
- PROPOSED DRIVE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED BRICK DRIVEWAY
- PROPOSED INTERMEDIATE CHANNEL
- PROPOSED DRIVE PAVEMENT
- PROPOSED CURB/PAV. LINE
- PROPOSED COMPOST FILTER SOCK 18"
- PROPOSED 18"X4" COMPOST FILTER SOCK
- PROPOSED 24"X4" COMPOST FILTER SOCK
- PROPOSED 32"X4" COMPOST FILTER SOCK
- PROPOSED CHANGE CONSTRUCTION FENCE
- PROPOSED 200# CONSTRUCTION FENCE
- PROPOSED INLET PROTECTION
- PROPOSED CHANNEL
- PROPOSED STORMWATER CHANNEL
- PROPOSED INLET
- PROPOSED WEIR/WEIR
- PROPOSED UNDERPASS
- PROPOSED EROSION CONTROL PLANT

**REVISION RECORD**

NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

**STREAM AND WETLAND NOTES**

1. WETLAND AREAS ARE BEING PROTECTED FOR THE FOLLOWING (1) (2) WETLANDS THAT ARE LOCATED WITHIN 100'-0" OF THE LIMIT OF DISTURBANCE WETLAND 1A 18.3, 140' x
2. THE CHANNELS SHOWN HEREON OUTSIDE THE LIMIT OF DISTURBANCE ARE PERMANENT OR SEMIPERMANENT. AS SUCH, A BUFFER IS NOT BEING PROVIDED FOR PERMANENT CHANNELS.
3. DRAINAGE SWATH HEREON ARE INDICATED FROM THE CENTER OF THE WETLAND TO THE EXTENDED LIMIT OF DISTURBANCE.

**COMPACTION SPECIFICATIONS**

1. PLACE FOR FULL MATERIAL USING COMPACTION EQUIPMENT WITH GREATER THAN 1000 LB WEIGHT TO COMPACTED LOTS NOT EXCEEDING 12" THICK LAY. A REDUCED LAYER THICKNESS OF 6" MUST BE MAINTAINED IN AREAS WHERE STEEL-PLATE TAMPERS OR OTHER HAND-OPERATED COMPACTORS ARE USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 3/8" IN STRUCTURAL FILL AREAS. REDUCED MAXIMUM PARTICLE SIZE OF 3/8" SHOULD BE USED IN OVERSIZED PARTICLES (EXCEEDING THE MAXIMUM PARTICLE SIZE INDICATED ABOVE) OUTSIDE OF THE PROPOSED FILL AREAS OR IN AREAS WHERE FULL OVERSIZED ROCK PARTICLES (I.E. MATERIALS EXCEEDING 8" DIAMETER) PLACED AT THE DEEPEST PARTS OF FILL SHOULD BE PLACED IN LOTS NOT EXCEEDING 6" THICK LAY. LOTS SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY VIBRATION COMPACTOR.
2. COMPACT ALL FILL AND ROADWAY SUBGRADE TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY WITHIN 1% TOLERANCE OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTER TEST AND OBTAIN MOISTURE CONTENT IN ACCORDANCE WITH ASTM D1557 (METHOD A, MOISTURE). (PROCTER)
3. ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED: REINFORCED CONCRETE (SEE AREA NOTES FOR DRAINAGE CATCH BASIN THROUGH 200# FIBER REINFORCED POLYMER).

**REFERENCES**

1. STREAM AND WETLANDS INDICATED BY D.C. & ENVIRONMENTAL CONSULTANTS, INC. DATED 03/24/2017
2. UNDERGROUND UTILITIES LOCATED BY A GEOTECHNICAL SURVEY CONDUCTED BY THE SURVEYS LTD. DATED 04/23/2017 TO 05/23/2017
3. UNDERGROUND UTILITIES BY D.C. & ENVIRONMENTAL CONSULTANTS, INC. DATED 06/19/2017 TO 07/12/2017
4. TOPOGRAPHY CONDUCTED BY ENVIRONMENTAL AERIAL PHOTOGRAPHY (EAP) BY D.C. & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/18/2016
5. PROPERTY BOUNDARIES WERE PROVIDED BY OWNER

**MISS UTILITY OF WEST VIRGINIA**  
 1-800-245-4848  
 100 West State Lane  
 Charleston, WV 25301  
 100 mg of the state of West Virginia  
**IT'S THE LAW**

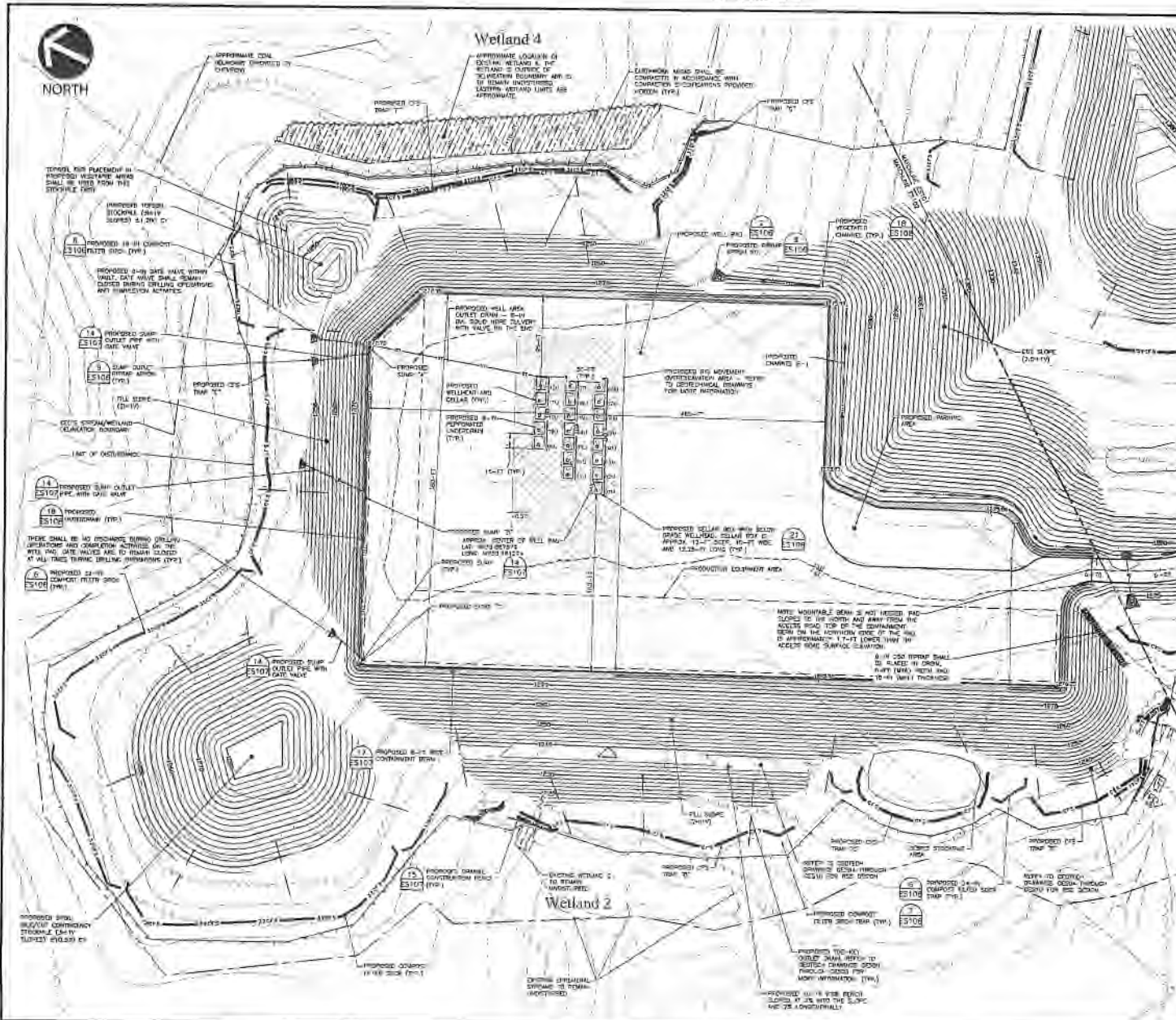
**FREELAND WELL PAD**  
 CLAY DISTRICT  
 MARSHALL COUNTY, WEST VIRGINIA  
 PREPARED FOR:  
**CHEVRON APPALACHIA, LLC**  
 700 CHEVRON PARKWAY  
 CORAOPOLIS, PA 15106

**EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)**

Project Number: 15106  
 Drawing Code: 15106  
 Date: 08/15/2017  
 Drawn By: JMM  
 Checked By: JMM  
 Project Manager: JMM

**ES 101**





**LEGEND**

- EXISTING PROPERTY LINE
- EXISTING HOSE CONDUIT
- EXISTING INTERMEDIATE CONDUIT
- EXISTING MAIN CONDUIT
- EXISTING CHANNEL ROADWAY
- EXISTING SIMULTANEOUS BOUNDARY
- EXISTING STREAM
- STREAM AND WETLAND DEMARCATION BOUNDARY
- EXISTING WETLAND
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING WATERLINE
- EXISTING TELECOMMUNICATION LINE
- EXISTING SPRAWLER WATER CONVEY
- EXISTING TREE LINE
- EXISTING WATER METER
- EXISTING UTILITY POLE
- EXISTING WELT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED EDGE OF ACCESS ROADWAY
- PROPOSED DRIVE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE CURB
- PROPOSED WETLAND AND CELLAR
- PROPOSED ROCK CONTROL
- PROPOSED HYDROLOGIC CONTOUR
- PROPOSED SLOPE
- PROPOSED DIRT FILL AREA
- PROPOSED 18-IN. CONCRETE FILLER SOUP
- PROPOSED 24-IN. CONCRETE FILLER SOUP
- PROPOSED 32-IN. CONCRETE FILLER SOUP
- PROPOSED CONCRETE CONSTRUCTION FENCE
- PROPOSED ROCK CONSTRUCTION FENCE
- PROPOSED WEED PROTECTION
- PROPOSED CHANNEL
- PROPOSED STORMWATER CONVEY
- PROPOSED PAVT
- PROPOSED RETAIN WALL
- PROPOSED WOODENWALL
- PROPOSED EROSION CONTROL ELEMENT

**STREAM AND WETLAND NOTES:**

- WETLAND BOUNDARIES ARE SHOWN BASED UPON THE FOLLOWING DATA: (A) WETLANDS THAT ARE LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE; WETLANDS 1A, 1B, 2, AND 4.
- THE STREAMS SHOWN HEREIN OUTSIDE THE LIMIT OF DISTURBANCE ARE SPATIALLY OR ORIENTED AS SUCH, A MAP IS NOT BEING SUBMITTED FOR FURTHER CLARIFICATION.
- WETLANDS SHOWN HEREIN ARE WETLANDS FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

**COMPACTION SPECIFICATIONS:**

- PLACE SOIL FILL MATERIALS USING COMPACTION EQUIPMENT WITH GREATER THAN 10-TON WHEELS OR EQUIVALENTS NOT EXCEEDING 18 INCHES WHEEL LIFT A REDUCED SOIL LIFT THICKNESS OF 8 INCHES (MAINTAIN) IN AREAS WHERE SITE-SPECIFIC TESTING OR OTHER HAND-INDICATED COMPACTIONS ARE NOT USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 3 INCHES IN SUBSTRUCTURAL AREAS AND 4 INCHES IN OTHER AREAS. COMPACTIONS ARE TO BE PERFORMED ABOVE SURFACE OF THE PROPOSED FILL AREAS OR IN DEEPER AREAS OF FULL INTEREST SOON AFTER THE MATERIALS ARE PLACED IN LAYS AND EXCEEDING 24 INCHES LIFT SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY COMPACTION EQUIPMENT.
- COMPACT ALL FILL AND SUBGRADE STRUCTURES AND SOIL LIFT OF FILL MATERIAL TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITHIN 48 HOURS OF THE COMPLETION OF THE CONSTRUCTION. MATERIALS SHOULD BE MOIST AND OPTIMUM MOISTURE CONTENT AS DETERMINED WITH ASTM D998 (STANDARD PROCTOR).
- ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED REINFORCED SOIL SLOPE (SOIL NAIL) WITH 24 INCHES DEEP THROUGH 24 INCHES FOR ADDITIONAL INFORMATION.

**REFERENCES:**

- STREAMS AND WETLANDS DELINEATED BY ONE & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
- MODIFICATION SURVEY LOCATED BY & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/22/2018 TO 05/23/2017.
- UTILITY PLANS PROVIDED BY ONE & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/22/2017 TO 05/23/2017.
- TOPOGRAPHY SURVEYED BY ONE & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/11/2018.
- PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.

**MISS UTILITY OF WEST VIRGINIA**  
1-800-245-4848  
www.missutility.com  
Section 101 Chapter 21-C Planning Part 101  
with the in the state of West Virginia  
**IT'S THE LAW**

**SCALE IN FEET**  
1" = 20'

**Freeland Well Pad**  
CLAY DISTRICT  
ANDERSON COUNTY, WEST VIRGINIA  
PREPARED FOR  
**CHEVRON APPALACHIA, LLC**  
700 WHERIMINGTON PARKWAY  
CORAOPOLIS, PA 15108

**EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)**

Project Number: ES-102  
Drawing Scale: 1"=20'  
Drawing Number: 21-02-01  
Drawing Date: 05/2018  
Drawing By: JSM  
Project Manager: JSM

**ES-102**

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

1) Well Operator: Chevron Appalachia, LLC 49449935 Marshall Clay Powhatan Point, W  
Operator ID County District Quadrangle

2) Operator's Well Number: M05H Well Pad Name: Freeland

3) Farm Name/Surface Owner: Freeland Public Road Access: CR 21 Robert Ridge Road

4) Elevation, current ground: 1274' Elevation, proposed post-construction: 1275'

5) Well Type (a) Gas X Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas Shallow X Deep \_\_\_\_\_  
Horizontal X \_\_\_\_\_

6) Existing Pad: Yes or No No

*Handwritten signature and date: 12/5/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus, 6370' below GL, 50' thick; Pore Pressure Gradient 0.64 psi/ft

8) Proposed Total Vertical Depth: 6,395

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21,496

11) Proposed Horizontal Leg Length: 13,497

12) Approximate Fresh Water Strata Depths: 572' below GL

13) Method to Determine Fresh Water Depths: Based on deepest water well within 2 mile radius

14) Approximate Saltwater Depths: 1709', 1789', 2120' below GL

15) Approximate Coal Seam Depths: Pittsburgh Coal top 794' below GL

16) Approximate Depth to Possible Void (coal mine, karst, other): No Void - In solid coal pillar

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Office of Oil and Gas

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

DEC 17 2018

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

WV Department of  
Environmental Protection

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New	X52	78.67	60	60	CTS
Fresh Water	13.375	New	J-55	54.5	622	622	CTS
Coal							
Intermediate	9.625	New	L-80	40	2,170	2,170	CTS
Production	5.5	New	P110	20	21,496	21,496	2,670' (500' below 9.625" shoe)
Tubing							
Liners							

*ju*  
12/11/18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26	0.375				
Fresh Water	13.375	17.5	0.38	2,730	400	Class A	1.2
Coal							
Intermediate	9.625	12.375 & 12.25	0.395	5,750	500	Class A	1.19
Production	5.5	8.75 & 8.5	0.361	14,360	2050	Class A, G, or H	1.25
Tubing							
Liners							

PACKERS

Kind:				RECEIVED Office of Oil and Gas
Sizes:				DEC 17 2018
Depths Set:				WV Department of Environmental Protection

*12/5/18*

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

Drill vertical depth to the Marcellus at an estimated total vertical depth of approximately 6,395 feet. Drill horizontal leg.

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

9525 bbl fluid - 400,000 lbm sand/stage - 9,400 anticipated max psi - 100 bpm anticipated max rate

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 24.2

22) Area to be disturbed for well pad only, less access road (acres): 5.0

23) Describe centralizer placement for each casing string:

Surface: (1) on shoe track w/ stop collar & (1) per jt over coupling to surface; Intermediate: (1) on shoe track w/ stop collar & (1) per 3 jts over coupling; Production String: (1) centralizer every jt in the lateral and curve & (1) every other joint from KOP to surface.

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

For the Water String the blend will contain class A cement, 3% CaCl<sub>2</sub>, and flake. The intermediate will contain class A cement, 3% CaCl<sub>2</sub>, Salt, and flake. The Production cement will have a lead and tail cement. The lead will contain class A, G, or H cement, KCl, dispersant, suspension agent, and retarder. The tail will contain class A, G, or H cement, Calcium Carbonate, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

RECEIVED  
Office of Oil and Gas

25) Proposed borehole conditioning procedures:

Air sections ensured to be clean via air circulation once TD is reached. Fluid sections will be circulated a minimum of 2 bottoms up once casing point has been reached and until uniform mud properties are achieved.

DEC 17 2018  
WV Department of  
Environmental Protection

\*Note: Attach additional sheets as needed.

4705102148 03/08/2019

**Cement Additives**

The Water String the blend will contain class A cement, 3% CaCl<sub>2</sub>, and flake.

The intermediate will contain class A cement, 10% CaCl<sub>2</sub>, Salt, and flake.

The Production cement will have a lead and tail cement.

The lead will contain class A, G, or H cement, KCl, dispersant, suspension agent, and retarder.

The tail will contain class A, G, or H cement, Calcium Carbonate, KCl, dispersant, de-foamer, suspension agent, and friction reducer.

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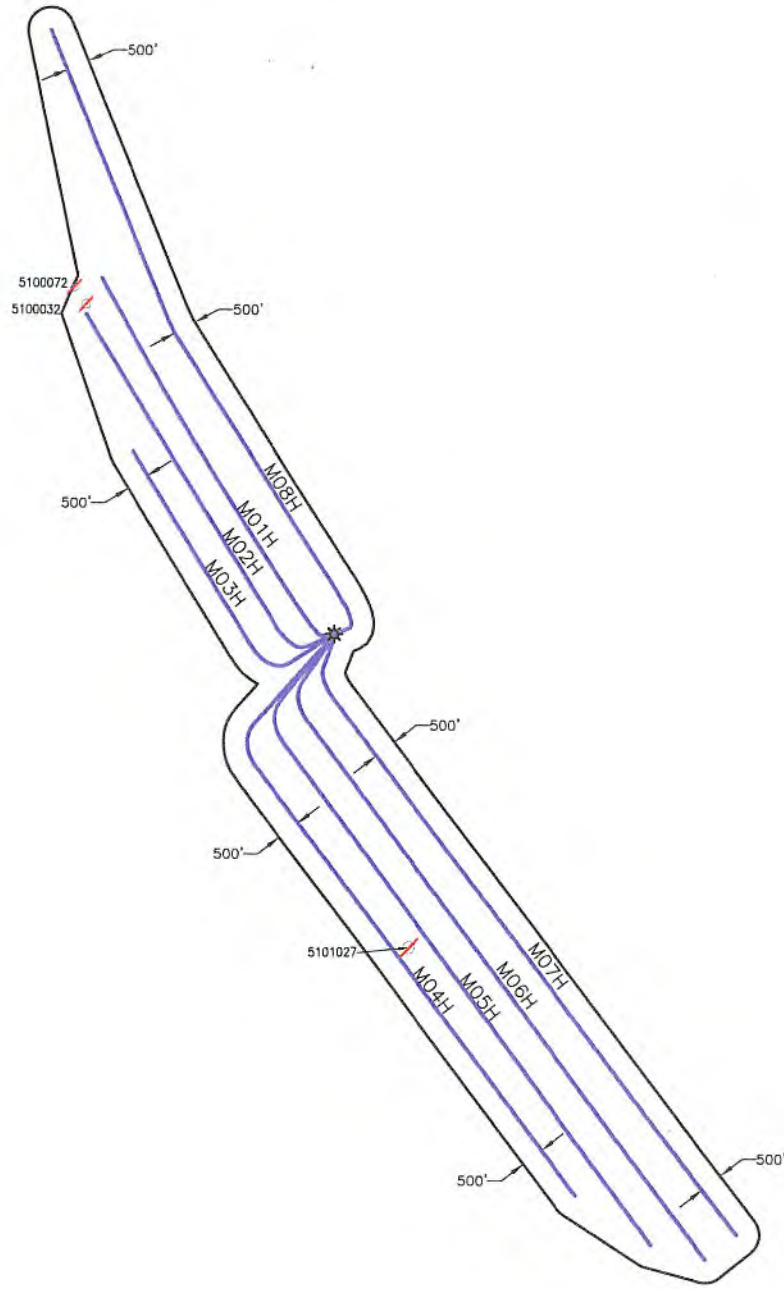
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WV Department of  
Environmental Protection

DRILLING FLUID / BIT TYPE / TFA		CENTRALIZER PROGRAM	CASING SIZE / FORMATION		DEPTH		WELLHEAD DESIGN		HOLE SIZE (IN)	CASING SPECS	CEMENT PROGRAM
MD (FT)	TVD (FT)	INC	AZM	Ground Level Elev. (ft above SL):				1,274			
Core Barrel / Auger	2 Bowspring per Jt	20" Conductor	65	65					30	Conductor 20" API 5L Minimum 40 ft from GL or at least 10 ft into bedrock	Grout to Surface
	Bow Spring: (1) on shoe track w/ stop collar & (1) per jt over coupling to surface	13-3/8" Casing	622	622					17.5	Surface Casing 13-3/8" 54.5# J-55 BTC 0.380" Wall Coupling OD (in) 14.375 ID (in) 12.615 Drift ID (in) 12.459 Burst (psi) 2,730 Collapse (psi) 1,130 Yield (Jt Strength 1,000 lbs) 853	Surface Blend (Class A) Cement to Surface
	Bow Spring: (1) on shoe track w/ stop collar & (1) per 3 fts over coupling	9-5/8" Casing	2,170	2,170					12.375 - 12.25	Intermediate Casing 9-5/8" 40# L-80 BTC 0.395" Wall Coupling OD (in) 10.825 ID (in) 8.835 Drift ID (in) 8.679 Burst (psi) 5,750 Collapse (psi) 3,080 Yield (Jt Strength 1,000 lbs) 916	Intermediate II Blend (Class A) Cement to Surface
	Bow Spring: (1) per every other jt over coupling  SpiraGlider or Centek: (1) per jt of csg to KCP    Float Equip.  Float Equip.	5-1/2" Casing	21,496						8.75 - 8.5	Production Casing 5-1/2" 20# P-110, 0.361" Wall Coupling OD (in) 6.300 ID (in) 4.778 Drift ID (in) 4.653 Burst (psi) 14,380 Collapse (psi) 12,090 Yield (Jt Strength 1,000 lbs) 729	Production Lead Slurry Cement to 500' below 9-5/8" shoe          Production Tail Slurry TOC minimum 200' above March 1/8

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*Handwritten signature and date:*  
12/15/18



**Blue Mountain Inc.**  
 10125 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

PREPARED FOR:  
 CHEVRON APPALACHIA, LLC  
 700 CHERRINGTON PARKWAY  
 CORAOPOLIS, PA 15108

- LEGEND**
- WELL LOCATION
  - PLUGGED WELL
  - ABANDON WELL

**FREELAND  
 AREA OF REVIEW MAP  
 MARSHALL COUNTY  
 CLAY DISTRICT  
 WEST VIRGINIA**

TOPO QUAD: POWHATAN POINT, WV  
 SCALE: 1" = 4000'  
 DATE: SEPTEMBER 7, 2018

4705102148

Well ID	Prior Operator On Record	Operator - DEP	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones/NOT Perforated
47-051-00072	Wasmuth-Callahan Gas Co.	Operator Unknown	ABANDONED	39.887867	-80.781834	N/A	N/A	None
47-051-00032	R L McDowell	Operator Unknown	ABANDONED	39.886851	-80.780892	N/A	N/A	None
47-051-01027	CNX Gas Company	CNX Gas Company LLC	ABANDONED	39.849249	-80.75489	N/A	N/A	None

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Environmental Protection



WW-9  
(4/16)

4705102148  
03/08/2019

API Number 47 - \_\_\_\_\_  
Operator's Well No. M05H \_\_\_\_\_

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Chevron Appalachia, LLC OP Code 49449935

Watershed (HUC 10) Short Creek - Ohio River Quadrangle Powhatan Point, WV 7.5'

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

Will a pit be used? Yes  No

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

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number at next anticipated well )
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: Yes, we will be utilizing multiple open/closed top tanks

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air to KOP & Oil from KOP to TMD

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

Additives to be used in drilling medium? Barite, fluid loss, emulsifiers, rheological control

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

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

-Landfill or offsite name/permit number? Short Creek Landfill/SWF-1034/WW0109517 and Arden Landfill/#100172

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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Jenny Butchko  
Company Official (Typed Name) Jenny Butchko  
Company Official Title Permitting Team Lead

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Environmental Protection

Subscribed and sworn before me this 24th day of September, 2018 Commonwealth of Pennsylvania  
Laura Savage County of Allegheny  
Notary Public

My commission expires September 17, 2022

Commonwealth of Pennsylvania - Notary Seal  
Laura Savage, Notary Public  
Allegheny County  
My commission expires September 17, 2022  
Commission number 1285773  
Member, Pennsylvania Association of Notaries

Chevron Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 18.8 Prevegetation pH 6.5-7.0

Lime 3 tons/acre Tons/acre or to correct to pH

Fertilizer type 10-20-20 or as directed by soil test

Fertilizer amount 300#/acre or as directed by soil test lbs/acre

Mulch 3 tons/acre or 5 tons/acre for winter stabilization Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Annual Ryegrass - 50

See Attached

Winter Wheat - 75

Cereal Ryegrass - 50

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

Jim [Signature]

Comments:

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WV Department of Environmental Protection

Title: Oil & Gas Inspector

Date: 12/5/18

Field Reviewed? (X) Yes ( ) No

03/08/2019

4705102148

**Seed Mixtures**

Seed Type	3ton/ac	lbs/acre
Non Agricultural Upland		6000 and
Tall Fescue	57%	3420.00
Perennial Ryegrass	19%	649.80
Ladino Clover	10%	64.98
Birdfoot - Trefoil	10%	6.50
Red Top	4%	0.26

Seed Type	Permanent
Hayfield, Pastureland, and Cropland	
Orchard Grass	
Timothy	
Birdfoot - Trefoil	
Ladino Clover	

40%	2400.00
40%	960.00
10%	96.00
10%	9.60

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Environmental Protection



**Chevron**

**Appalachian LLC**  
**WV Well Site Safety Plan**  
**Pad: Freeland Pad A**  
**Well # M05H**

*ju*  
*12/5/18*

**3599 Roberts Ridge Rd**  
**Moundsville, WV 26041**  
**Clay District**  
**Marshall County, WV**

**Access Point – [39.865278°N, 80.758511°W]**  
**Well Site – [39.867578°N, 80.761275°W]**  
**Marshall County, West Virginia**

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Environmental Protection

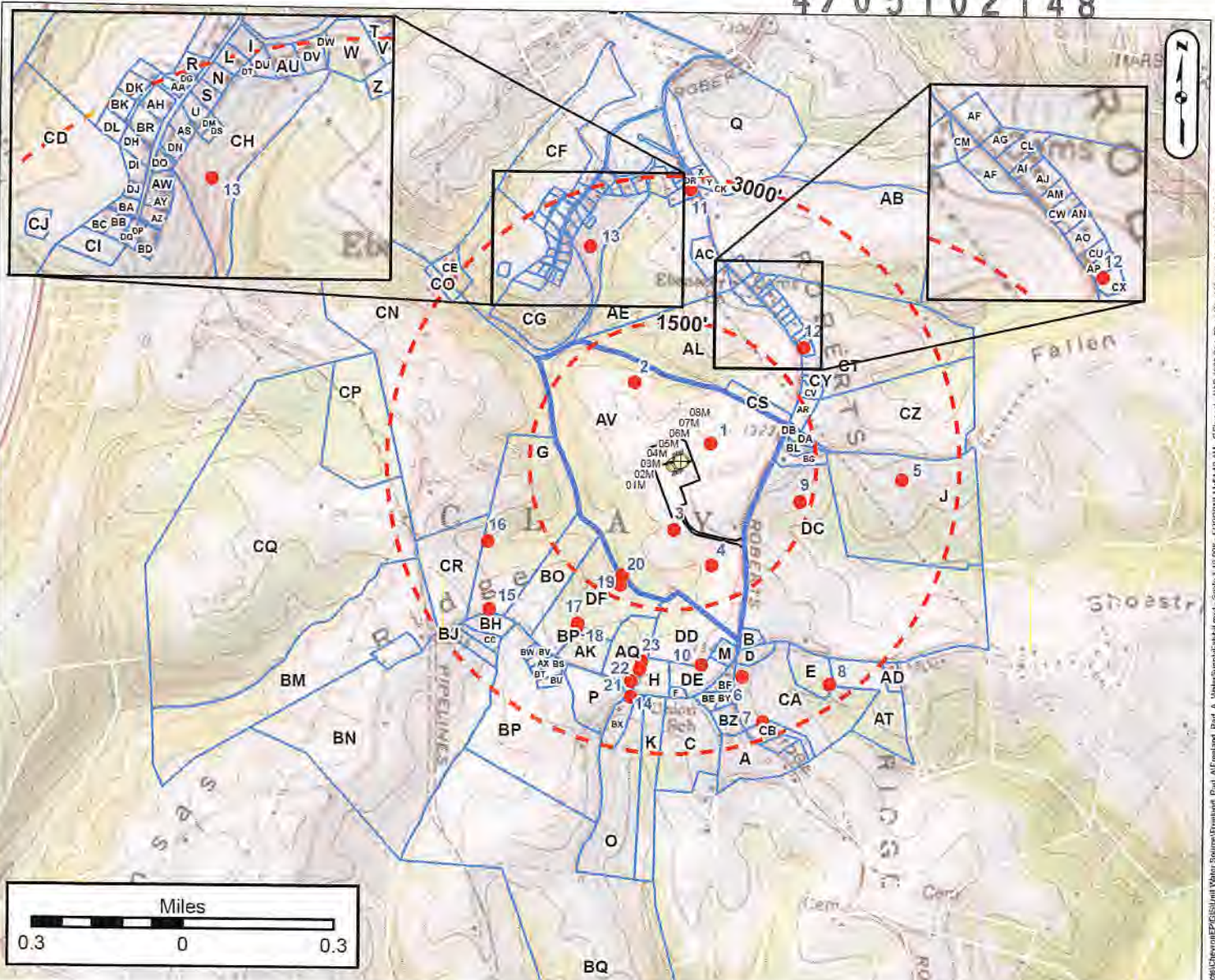


# WATER SUPPLY EXHIBIT FREELAND PAD A

03/08/2019



## 4705102148





### LOT OWNERS

Parcel ID	Label	OWNER	Parcel ID	Label	OWNER	Parcel ID	Label	OWNER	Parcel ID	Label	OWNER
25-04 1300120000	A	HARVEY OWEN ELWOOD	25-04 7800320000	AA	WHEATSTONE DUKE W 2 COM	25-04 7800400000	AB	OWENS GARRETT C	25-04 7800500000	AC	ROBERTSON RAYMOND AM
25-04 7800200000	B	HUNT WILLIAM ROBERT	25-04 7800300000	AD	YODanis MICHAEL WILLIAM	25-04 7800400000	AE	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AF	HOLING MICHAEL WILLIAM
25-04 1300070000	C	DAVIS PHILIP ET UX	25-04 7800300000	AE	YODanis MICHAEL WILLIAM	25-04 7800400000	AG	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AH	HOLING MICHAEL WILLIAM
25-04 1300070000	D	DAVIS PHILIP ET UX	25-04 7800300000	AF	YODanis MICHAEL WILLIAM	25-04 7800400000	AI	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AJ	HOLING MICHAEL WILLIAM
25-04 1300070000	E	DAVIS PHILIP ET UX	25-04 7800300000	AG	YODanis MICHAEL WILLIAM	25-04 7800400000	AK	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AL	HOLING MICHAEL WILLIAM
25-04 1300070000	F	DAVIS PHILIP ET UX	25-04 7800300000	AL	YODanis MICHAEL WILLIAM	25-04 7800400000	AM	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AN	HOLING MICHAEL WILLIAM
25-04 1300070000	G	DAVIS PHILIP ET UX	25-04 7800300000	AM	YODanis MICHAEL WILLIAM	25-04 7800400000	AO	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AP	HOLING MICHAEL WILLIAM
25-04 1300070000	H	DAVIS PHILIP ET UX	25-04 7800300000	AO	YODanis MICHAEL WILLIAM	25-04 7800400000	AA	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AB	HOLING MICHAEL WILLIAM
25-04 1300070000	I	DAVIS PHILIP ET UX	25-04 7800300000	AA	YODanis MICHAEL WILLIAM	25-04 7800400000	AB	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AC	HOLING MICHAEL WILLIAM
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25-04 1300070000	K	DAVIS PHILIP ET UX	25-04 7800300000	AC	YODanis MICHAEL WILLIAM	25-04 7800400000	AD	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AE	HOLING MICHAEL WILLIAM
25-04 1300070000	L	DAVIS PHILIP ET UX	25-04 7800300000	AD	YODanis MICHAEL WILLIAM	25-04 7800400000	AE	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AF	HOLING MICHAEL WILLIAM
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25-04 1300070000	W	DAVIS PHILIP ET UX	25-04 7800300000	AD	YODanis MICHAEL WILLIAM	25-04 7800400000	AE	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AS	HOLING MICHAEL WILLIAM
25-04 1300070000	X	DAVIS PHILIP ET UX	25-04 7800300000	AE	YODanis MICHAEL WILLIAM	25-04 7800400000	AF	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AT	HOLING MICHAEL WILLIAM
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25-04 1300070000	Z	DAVIS PHILIP ET UX	25-04 7800300000	AG	YODanis MICHAEL WILLIAM	25-04 7800400000	AH	ROBEY VICTORIA B & CONSTANCE E	25-04 7800500000	AV	HOLING MICHAEL WILLIAM

Surface Owner: JOSEPH FREELAND  
 Oil/Gas Owner: JOSEPH FREELAND  
 Well Operator: CHEVRON APPALACHIA, LLC  
 Address: 700 CHERRINGTON PARKWAY  
CORAOPOLIS, PA 15108  
 Phone: 724-564-3700

County: MARSHALL  
 Township: MOUNDSVILLE, WV  
 Groundwater & Environmental Surveyor: SERVICES, INC.  
 Address: 301 COMMERCE PARK DR  
CRANBERRY TOWNSHIP, PA 16066  
 Phone: 800-267-2549

NOTICE: THE INTENT OF THIS EXHIBIT IS TO IDENTIFY EXISTING WATER SUPPLIES IN THE VICINITY OF A PROPOSED GAS WELL. AND IS NOT A COMPLETE BOUNDARY SURVEY. PROPERTY LINES AND OWNER INFORMATION WERE OBTAINED FROM DEEDS, TAX RECORDS, AERIAL PHOTOGRAPHY, GIS, AND FIELD SURVEY INFORMATION.

BHL is located on topo  map 480 feet south of Latitude: 39° 50' 00"  
 SHL is located on topo  map 2,709 feet south of Latitude: 39° 52' 30"

**SEE PAGE 2 FOR PLAT DUE TO LENGTH OF LATERAL**

**SEE PAGE 3 FOR LESSORS**

	SURFACE OWNER	DIST-TM/PAR
1	JOSEPH L. FREELAND ET UX	4-7/21
2	NORMAN L. DERROW ET UX	4-7/32
3	KRISTA JO & DAVID LEE ELLIOTT	4-7/32.2
4	WILLIAM L. & LINDA L. LEMASTERS	4-13/1.7
5	*WILLIAM L. LEMASTERS	4-13/1.6
6	WILLIAM L. LEMASTERS	4-13/1.2
7	WILLIAM L. LEMASTERS	4-13/1.4
8	WILLIAM L. LEMASTERS	4-13/1.5
9	WILLIAM L. LEMASTERS	4-13/1.3
10	CHARLES W. ELLER ET UX	4-13/1.1
11	EUGENE C. & ELIZABETH A. ESTEP	4-13/4.1
12	EUGENE C. & ELIZABETH A. ESTEP	4-13/1
13	SHAWN T. & KELLY J. DANAHEY	4-13/4
14	SHAWN T. DANAHEY ET UX	4-13/4.2
15	TERRY LEE CAMPBELL	4-13/5.6
16	TERRY LEE CAMPBELL	4-13/5.10
17	*LAKEN H. DRAKE	4-13/5
18	PNC BANK N/A	4-13/6
19	*JOHN STOCKLASK	4-13/5.11
20	*LAKEN H. DRAKE	4-13/5.7
21	JOHN DRAKE ET UX	4-13/5.3
22	*JOHN DRAKE ET UX	4-13/5.5
23	LAKEN H. DRAKE	4-13/5.2
24	LAKEN H. DRAKE	4-13/5.8
25	IMOGENE WHITFIELD - LIFE	4-13/21
26	IMOGENE WHITFIELD - LIFE	4-13/23
27	LINDA LEE WILLIAMS - TOD	4-13/25.1
28	LLOYD BAKER	4-13/25.2
29	DONALD WAYT	5-3/3
30	ROGER WAYNE RINE	5-3/32.11
31	RALPH A. & ELLA BEA CHAPLIN	5-3/32.1
32	DALLAS PAUL RINE	5-3/32.12
33	KEITH A. & STACY HILL	5-3/32.10
34	JOHN ROBERT HILL ET UX - LIFE	5-3/32.4
35	JEFFREY A. SZAFRAN	5-3/6
36	THOMAS MONTI ET AL	5-3/9
37	JOAN JORDAN	5-3/11.1
38	RAYMOND L. & DOROTHY L. MIDCAP	5-3/10
39	RALPH ALLEN & ROBIN HOLMES	5-3/11
40	RALPH ALLEN & ROBIN HOLMES	5-3/12
41	CNX LAND RESOURCES INC	5-3/23
42	GLEN L. CUNNINGHAM ET UX	5-3/14
43	*GLENN L. CUNNINGHAM ET UX	5-4/4



03/08/2019

**SURFACE HOLE LOCATION (SHL)**  
 UTM 17-NAD83(M)  
 N:4413093.48  
 E:520432.09  
 NAD83\_WV NORTH  
 N:500621.702  
 E:1614535.717

**APPROX. LANDING POINT**  
 UTM 17-NAD83(M)  
 N:4412395.45  
 E:520096.83  
 NAD83\_WV NORTH  
 N:498349.518  
 E:1613397.260

**BOTTOM HOLE LOCATION (BHL)**  
 UTM 17-NAD83(M)  
 N:4409146.56  
 E:522618.42  
 NAD83\_WV NORTH  
 N:487550.002  
 E:1621493.702

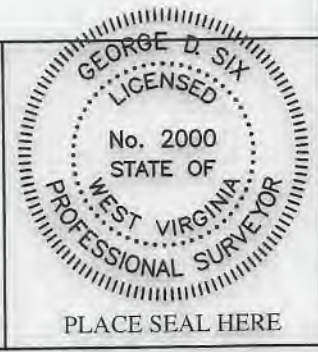
BHL is located on topo map 7,677 feet west of Longitude: 80° 42' 30"  
 SHL is located on topo map 3,277 feet west of Longitude: 80° 45' 00"



\* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

FILE #: FREELAND M05H  
 DRAWING #: FREELAND M05H  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/2500  
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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.  
 Signed: *George D. Six*  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. No. 2000



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304



DATE: OCTOBER 12, 2018  
 OPERATOR'S WELL #: FREELAND M05H  
 API WELL #: 47 51 02148  
 STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  Gas  Liquid Injection  Storage  Shallow

WATERSHED: SHORT CREEK-OHIO RIVER ELEVATION: 1274.00'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: POWATAN POINT, WV 7.5'

SURFACE OWNER: JOSEPH L. FREELAND ET UX ACREAGE: 104.22±

OIL & GAS ROYALTY OWNER: JOSEPH FREELAND ET UX ACREAGE: 734.903±

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION   
 PERFORATE NEW FORMATION  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE

(SPECIFY): \_\_\_\_\_ TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,395'± TMD: 21,496.45'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY  
 Address 700 CHERRINGTON PARKWAY Address 500 LEE STREET, EAST SUITE 1600  
 City CORAOPOLIS State PA Zip Code 15108 City CHARLESTON State WV Zip Code 25301-3202

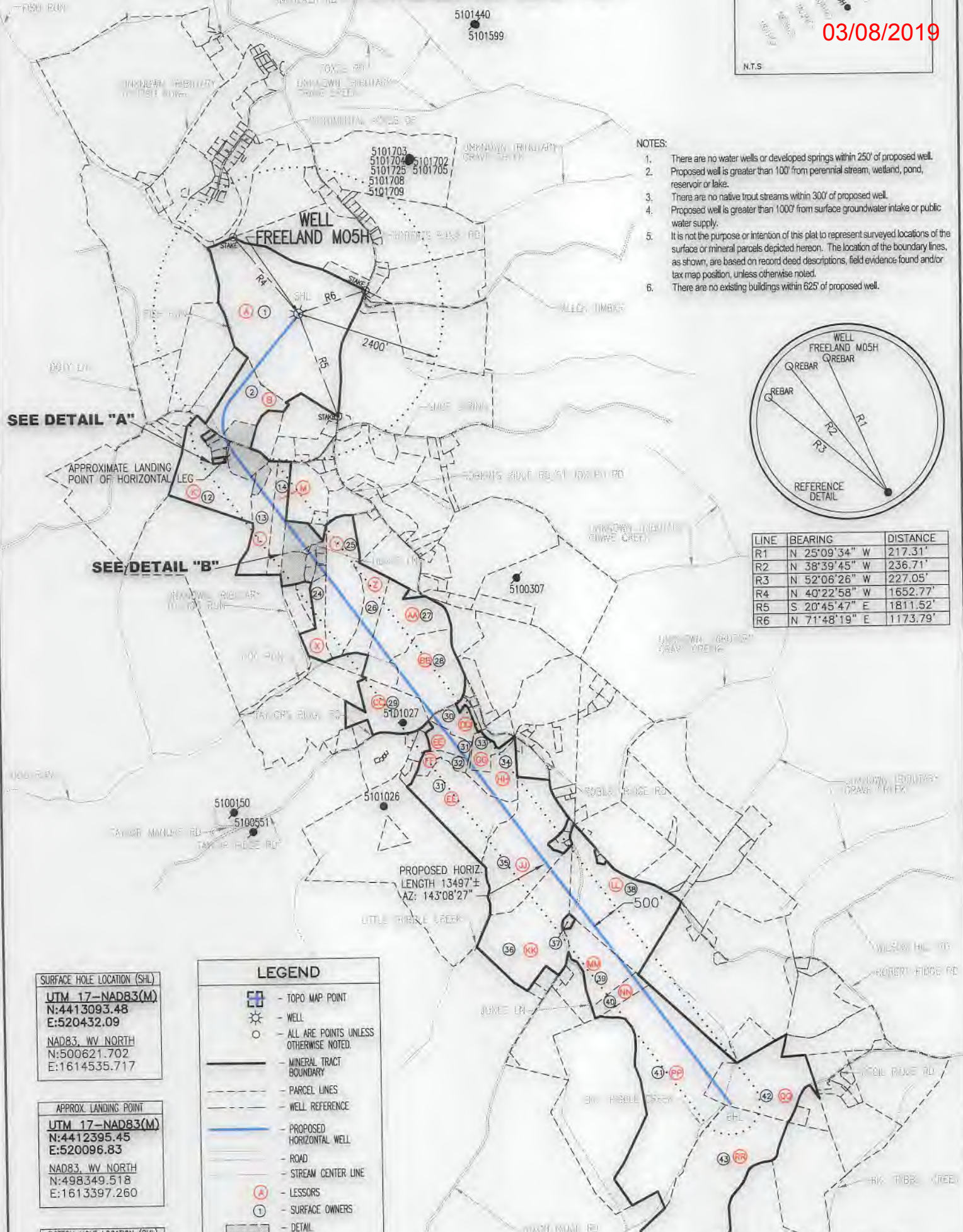
# FREELAND M05H PAGE 2 OF 4



WELL PAD ORIENTATION DETAIL

03/08/2019

N.T.S.



- NOTES:**
1. There are no water wells or developed springs within 250' of proposed well.
  2. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
  3. There are no native trout streams within 300' of proposed well.
  4. Proposed well is greater than 1000' from surface groundwater intake or public water supply.
  5. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.
  6. There are no existing buildings within 625' of proposed well.



LINE	BEARING	DISTANCE
R1	N 25°09'34" W	217.31'
R2	N 38°39'45" W	236.71'
R3	N 52°06'26" W	227.05'
R4	N 40°22'58" W	1652.77'
R5	S 20°45'47" E	1811.52'
R6	N 71°48'19" E	1173.79'

SEE DETAIL "A"

SEE DETAIL "B"

PROPOSED HORIZ.  
LENGTH 13497' ±  
AZ: 143°08'27"

**SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83(M)  
N:4413093.48  
E:520432.09  
NAD83, WV NORTH  
N:500621.702  
E:1614535.717

**APPROX. LANDING POINT**  
UTM 17-NAD83(M)  
N:4412395.45  
E:520096.83  
NAD83, WV NORTH  
N:498349.518  
E:1613397.260

**BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83(M)  
N:4409146.56  
E:522618.42  
NAD83, WV NORTH  
N:487550.002  
E:1621493.702

**LEGEND**

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- LESSORS
- SURFACE OWNERS
- DETAIL

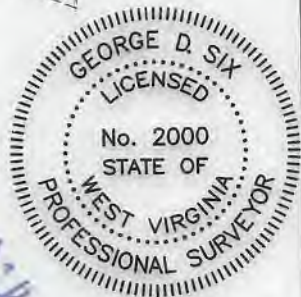
**GAS WELLS**

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

**OCTOBER 12, 2018**

**Blue Mountain**  
11023 MASON DIXON HIGHWAY  
BURTON, WV 26562  
PHONE: (304) 662-6486

George D. Six



47-051-02148

# FREELAND M05H PAGE 3 OF 4

03/08/2019

	LESSOR	DIST-TM/PAR
A	JOSEPH FREELAND ET UX	4-7/21
B	NORMAN L. DERROW ET UX	4-7/32
C	KRISTA JO ELLIOTT ET VIR	4-7/32.2
D	*WILLIAM L. LEMASTERS ET UX	4-13/1.6
E	WILLIAM L. LEMASTERS ET UX	4-13/1.2
F	EUGENE C. ESTEP ET UX	4-13/1.4
G	EUGENE C. ESTEP ET UX	4-13/1.3
H	EUGENE C. ESTEP ET UX	4-13/1.1
J	EUGENE C. ESTEP ET UX	4-13/4.1
K	EUGENE C. ESTEP ET UX	4-13/1
L	SHAWN T. DANAHEY ET UX	4-13/4
M	SHAWN T. DANAHEY ET UX	4-13/4.2
N	TERRY L. CAMPBELL ET VIR	4-13/5.6
P	TERRY L. CAMPBELL ET VIR	4-13/5.10
Q	*H3 LLC	4-13/5
R	JOHN M. STOCKLASK	4-13/6
S	*JOHN DRAKE ET UX	4-13/5.11
T	*STANLEY W. HUNT	4-13/5.7
U	JOHN DRAKE ET UX	4-13/5.3
V	*H3 LLC	4-13/5.5
W	STANLEY W. HUNT	4-13/5.2
X	STANLEY W. HUNT	4-13/5.8
Y	IMOGENE WHITFIELD	4-13/21
Z	IMOGENE WHITFIELD	4-13/23
AA	CHARLES WILLIAMS ET UX	4-13/25.1
BB	LLOYD G. BAKER	4-13/25.2
CC	DONALD L. WAYT	5-3/3
DD	AMP FUND II GP LLC	5-3/32.11
EE	AMP FUND II GP LLC	5-3/32.1
FF	AMP FUND II GP LLC	5-3/32.12
GG	KEITH A. HILL ET UX	5-3/32.10
HH	CAROL ELLEN HILL MARK O. HILL MELISSA J. DAVIS KEITH A. HILL	5-3/32.4
JJ	CHARLOTTE S. SZAFRAN JEFFREY A. SZAFRAN JEFFREY D. ROBINSON UX RANDY D. ROBINSON MARK A. ROBINSON BRIAN FURBEE GREGORY D. FURBEE MARSHA A. SINGER EDMOND J. FURBEE CHRISTOPHER G. FURBEE MATTHEW R. FURBEE	5-3/6

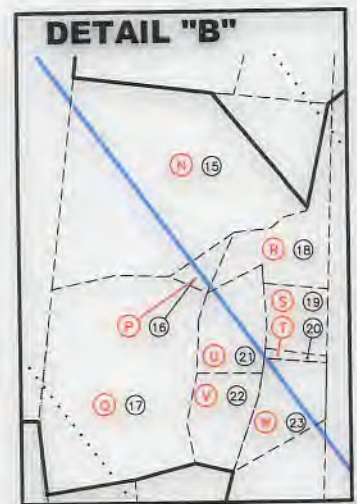
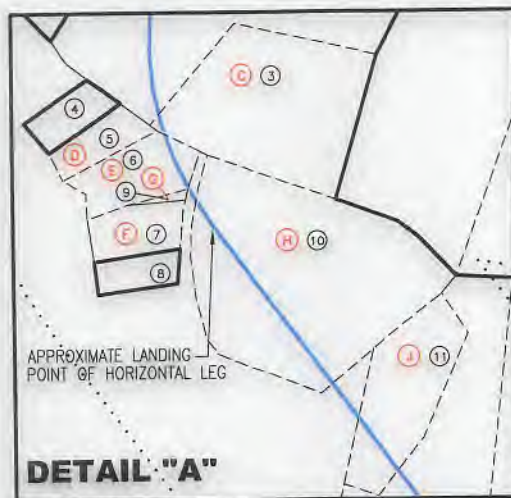
	LESSOR	DIST-TM/PAR
JJ	MAUREEN C. COOPER	5-3/6
	REXENA A. CUNNINGHAM	
	RICHARD CECIL ET UX	
	SHERRY L. MORRIS	
	WILLIAM R. POLEN	
	DEBBIE MAE MOORE	
	ETHEL E. STARKEY AKA ETHEL ELAINE STARKEY	
	CALLENE M. PETERSON FKA CALLENE M. STARKEY	
	REBECCA JEAN BROWN	
	PAULA J. ROHRER	
	MARLA K. STRUHAR	
	SARAH SISLEY FKA SARAH SALSBERY ET VIR	
	CARALOTTA J. GIBSON FKA CARALOTTA SALSBERY	
	JOHN M. SALSBERY BY JASON L. JACKSON GUARDIAN	
	DELLA J. COVERDALE ET UX	
	TRACY M. SALSBERY AKA TRACY SALSBERY	
	GINGER L. SALSBERY AKA GINGER SALSBERY	
	DALE A. SALSBERY AKA DALE ADORIN SALSBERY	
	JODIE R. MORRIS FKA JODIE SALSBERY	
	BARBARA L. MCGAHA	
	ELAINE M. KEENER	
	SHERRY KAY RISHER	
	SANDRA LEE KNAPSKI	
	BRENT LEE STARKEY	
	FORREST STARKEY ET UX	
	ANITA STANLEY FKA ANITA STARKEY	
	LINDA D. MAYO ET VIR	
	CAROL JEAN MALILKA ALBERT	
	SHARON L. SCHARTIGER	
	JANET SHADDICK	
	DUANE M. STARKEY ET UX	
	REGINA KAY ST GEORGE ET VIR	
	BETTY LOU STARKEY	
	PATTIE S. MADRID FKA PATTIE S. SPEAR	
KK	STEPHEN M. THOMAS ET UX R. STEPHEN THOMAS ET UX JOHN RESSEGER LAURA VIRGINIA RESSEGER WILLIAM ELMER RESSEGER	5-3/9
LL	DOROTHY L. MIDCAP	5-3/10
MM	RALPH ALLEN HOLMES	5-3/11
NN	RALPH ALLEN HOLMES	5-3/12
PP	LARRY E. HILL	5-3/23
QQ	GLENN L. CUNNINGHAM ET UX	5-3/14

\* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

**SURFACE HOLE LOCATION (SHL)**  
UTM 17-NAD83(M)  
N:4413093.48  
E:520432.09  
  
NAD83, WV NORTH  
N:500621.702  
E:1614535.717

**APPROX. LANDING POINT**  
UTM 17-NAD83(M)  
N:4412395.45  
E:520096.83  
  
NAD83, WV NORTH  
N:498349.518  
E:1613397.260

**BOTTOM HOLE LOCATION (BHL)**  
UTM 17-NAD83(M)  
N:4409146.56  
E:522618.42  
  
NAD83, WV NORTH  
N:487550.002  
E:1621493.702



**OCTOBER 12, 2018**



# FREELAND

## M05H

### PAGE 4 OF 4

03/08/2019

RR	LESSOR	DIST-TM/PAR
	*MICHAEL GORDON WHITE ET UX	5-4/4
	*DANIEL JOSEPH HAMMEL	
	*DAVID ANTHONY HAMMEL SR.	
	*JAMES ROBERT EVANS SR.	
	*ELIZABETH S. HUDSON	
	*PAUL PATTERSON ET UX	
	*RONALD L. PATTERSON	
	*HEATHER LEE DAVIS	
	*JAMES PATTERSON	
	*DAVID LEE MARTIN	
	*JUDITH PEARCE	
	*WENDELL W. JONES SR., ET UX	
	*JODIE CAROL WIGNER	
	*GERALDINE ANNE BRACKEN	
	*MARY LOU SNYDER	
	*PATRICIA A. PEARCE	
	*ANDREA EVANS HORTON	
	*MARY CATHERINE HOOD	
	*JANET F. HIGGINS	
	*TIMOTHY P. EVANS	
	*HEATHER NICOLE EVANS	
	*BARBARA THOMSEN	
	*GLORIA YEAGER	
	*BECKY OLIVER	
	*GERALD WAYNE MARTIN ET UX	
	*GARY D. ALLEN	
	*MARTIE JO MARTIN	
	*HUGH L. JONES ET UX	
	*KAROL L. BABEL	
	*WILLIAM S. MILLER ET UX	
	*GLADYS JANE BALDERSON	
	*MARGARET ROBERTA DAVIS	
	*RICHARD DOUGLAS WAYT ET UX	
	*RUTH ANN HARRIGAN	
	*LINDA FAYE SCOLICK	
	*GERALD CLINTON OLIVER ET UX	
	*JOSEPH W. OLIVER	
	*JUDITH K. SHARP	
	*GERALD C. OLIVER ET UX	
	*CARL ALLEN ET UX	
	*HOLLY K. WAYT	
	*JOHN D. OLIVER	
	*MICHAEL CHAMBERS	
	*TED IANNARELLI ET UX	
	*CARRIE LEE HENDERSON	
	*JAMES A. OLIVER	
	*SUSAN M. MCGILL	
	*MICHAEL A. MAY	
	*ROBERT LEO ALLEN ET UX	
	*LAWRENCE MANNELLA ET UX	
	*PEGGY MARTIN	
	*GLENN L. CUNNINGHAM ET UX	
	*DELORES J. MYERS	
	*JOHN G. CALVERT	

\* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

SURFACE HOLE LOCATION (SHL)
<b>UTM 17-NAD83(M)</b>
N:4413093.48
E:520432.09
NAD83, WV NORTH
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E:1614535.717

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NAD83, WV NORTH
N:498349.518
E:1613397.260

BOTTOM HOLE LOCATION (BHL)
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N:4409146.56
E:522618.42
NAD83, WV NORTH
N:487550.002
E:1621493.702

**OCTOBER 12, 2018**

**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
----------------------	-----------------------	-----------------------	---------	-----------

See Attached

**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: Chevron Appalachia, LLC  
 By: Jenny Butchko  
 Its: Permitting Team Lead

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DEC 17 2018

4705102148

## Freeland Unit #5H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
A	4-7-21	FREELAND JOSEPH ET UX	Chevron U.S.A. Inc.	0.180	932/374	n/a	n/a	n/a
B	4-7-32	DERROW NORMAN L ET UX	Chevron U.S.A. Inc.	0.18	852/409	n/a	n/a	n/a
C	4-7-32.2	ELLIOT KRISTA JO ET VIR	Chevron U.S.A. Inc.	0.18	852/406	n/a	n/a	n/a
D	4-13-1.6	LEMASTERS WILLIAM L ET UX	Noble Energy, Inc.	0.15	797/432	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
E	4-13-1.2	LEMASTERS WILLIAM L ET UX	Noble Energy, Inc.	0.15	797/432	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
F	4-13-1.4	ESTEP EUGENE C ET UX	Chevron U.S.A. Inc.	0.18	861/613	n/a	n/a	n/a
G	4-13-1.3	ESTEP EUGENE C ET UX	Chevron U.S.A. Inc.	0.18	861/613	n/a	n/a	n/a
H	4-13-1.1	ESTEP EUGENE C ET UX	Chevron U.S.A. Inc.	0.18	861/613	n/a	n/a	n/a
J	4-13-4.1	ESTEP EUGENE C ET UX	Chevron U.S.A. Inc.	0.18	861/613	n/a	n/a	n/a
K	4-13-1	ESTEP EUGENE C ET UX	Chevron U.S.A. Inc.	0.18	861/613	n/a	n/a	n/a
L	4-13-4	DANAHEY SHAWN T ET UX	TH Exploration, LLC	0.18	876/64	36/168 TH Exploration, LLC to Chevron U.S.A. Inc.	n/a	n/a
M	4-13-4.2	DANAHEY SHAWN T ET UX	TH Exploration, LLC	0.18	876/64	36/168 TH Exploration, LLC to Chevron U.S.A. Inc.	n/a	n/a
N	4-13-5.6	CAMPBELL TERRY L ET VIR	Tri Energy Holdings, LLC	0.16	705/492	24/180 TriEnergy Holdings, LLC to NPAR, LLC	756/332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
P	4-13-5.10	CAMPBELL TERRY L ET VIR	Tri Energy Holdings, LLC	0.16	705/492	24/180 TriEnergy Holdings, LLC to NPAR, LLC	756/332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
Q	4-13-5	H3 LLC	Chevron U.S.A. Inc.	0.18	949/7	n/a	n/a	n/a
R	4-13-6	STOCKLASK JOHN M	Chesapeake Appalachia, LLC	0.17	701/392	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.

Office of Oil and Gas

DEC 17 2018

WV Department of  
Environmental Protection

Freeland Unit #5H - BATCH 1 - MRCL FULL

4705102148

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
Z	4-13-23	WHITFIELD IMOGENE	AB Resources, LLC	0.125	689/89	24/466 AB Resources et al to Chief Exploration and Development et al	25/105 Chief Exploration and Development et al to Chevron U.S.A. Inc.	756/397 AB Resources, LLC to Chevron U.S.A. Inc.
AA	4-13-25.1	WILLIAMS CHARLES ET UX	Chevron U.S.A. Inc.	0.18	838/545	n/a	n/a	n/a
BB	4-13-25.2	BAKER LLOYD G	Chevron U.S.A. Inc.	0.18	861/583	n/a	n/a	n/a
CC	5-3-3	WAYT DONALD L.	Noble Energy, Inc.	0.16	796/127	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
DD	5-3-32.11	AMP FUND II GP LLC	American Petroleum Partners Operating, LLC	0.125	919/380	40/267 American Petroleum Partners Operating, LLC to Chevron U.S.A. Inc.	n/a	n/a
EE	5-3-32.1	AMP FUND II GP LLC	American Petroleum Partners Operating, LLC	0.125	919/380	40/267 American Petroleum Partners Operating, LLC to Chevron U.S.A. Inc.	n/a	n/a
FF	5-3-32.12	AMP FUND II GP LLC	American Petroleum Partners Operating, LLC	0.125	919/380	40/267 American Petroleum Partners Operating, LLC to Chevron U.S.A. Inc.	n/a	n/a
GG	5-3-32.10	KEITH A HILL ET UX	Noble Energy, Inc.	0.17	845/189	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
		HILL CAROL ELLEN	Noble Energy, Inc.	0.17	845/185	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a

Office of Coal and Gas

DEC 17 2018

WV Department of Environmental Protection

4705102148

Freeland Unit #5H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
S	4-13-5.11	DRAKE JOHN ET UX	Chesapeake Appalachia, LLC	0.17	701/389	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.
T	4-13-5.7	HUNT STANLEY W	Chesapeake Appalachia, LLC	0.17	701/386	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.
U	4-13-5.3	DRAKE JOHN ET UX	Chesapeake Appalachia, LLC	0.17	701/389	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.
V	4-13-5.5	H3 LLC	Chevron U.S.A. Inc.	0.18	949/7	n/a	n/a	n/a
W	4-13-5.2	HUNT STANLEY W	Chesapeake Appalachia, LLC	0.17	701/386	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.
X	4-13-5.8	HUNT STANLEY W	Chesapeake Appalachia, LLC	0.17	701/386	29/325 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/392 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.	30/404 Statoil USA Onshore Properties Inc. to Chevron U.S.A. Inc.
Y	4-13-21	WHITFIELD IMOGENE	AB Resources, LLC	0.125	689/89	24/466 AB Resources et al to Chief Exploration and Development et al	25/105 Chief Exploration and Development et al to Chevron U.S.A. Inc.	756/397 AB Resources, LLC to Chevron U.S.A. Inc.

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Office of Oil and Gas

DEC 17 2018

WV Department of Environmental Protection

4705102148

Freeland Unit #5H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
HH	5-3-32.4	HILL MARK O	Noble Energy, Inc.	0.17	845/187	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
		DAVIS MELISSA J	Noble Energy, Inc.	0.17	845/167	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
		HILL KEITH A	Noble Energy, Inc.	0.17	845/252	39/1 Noble Energy, Inc. to HG Energy II Appalachia	40/577 HG Energy II Appalachia to Chevron U.S.A. Inc.	n/a
JJ		SZAFRAN CHARLOTTE S - SFX	Chevron U.S.A. Inc.	0.200	939/124	n/a	n/a	n/a
		SZAFRAN JEFFREY A - SFX	Chevron U.S.A. Inc.	0.200	939/223	n/a	n/a	n/a
		ROBINSON JEFFREY D UX - SFX	Chevron U.S.A. Inc.	0.180	887/576	n/a	n/a	n/a
		ROBINSON RANDY D - SFX	Chevron U.S.A. Inc.	0.180	880/539	n/a	n/a	n/a
		ROBINSON MARK A - SFX	Chevron U.S.A. Inc.	0.180	887/573	n/a	n/a	n/a
		FURBEE BRIAN - SFX	Chevron U.S.A. Inc.	0.180	939/136	n/a	n/a	n/a
		FURBEE GREGORY D - SFX	Chevron U.S.A. Inc.	0.180	939/139	n/a	n/a	n/a
		SINGER MARSHA A - SFX	Chevron U.S.A. Inc.	0.180	890/469	n/a	n/a	n/a
		FURBEE EDMOND J - SFX	Chevron U.S.A. Inc.	0.180	926/68	n/a	n/a	n/a
		FURBEE CHRISTOPHER G - SFX	Chevron U.S.A. Inc.	0.180	873/613	n/a	n/a	n/a
		FURBEE MATTHEW R - SFX	Chevron U.S.A. Inc.	0.180	880/440	n/a	n/a	n/a
		COOPER MAUREEN C - SFX	Chesapeake Appalachia, LLC	0.125	691/26	24/338 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/427 Statoil USA Onshore Properties, Inc to Chevron U.S.A. Inc.	30/461 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.
		CUNNINGHAM REXENA A - SFX	Chevron U.S.A. Inc.	0.180	873/610	n/a	n/a	n/a
		CECIL RICHARD ET UX - SFX	Chevron U.S.A. Inc.	0.180	871/132	n/a	n/a	n/a
MORRIS SHERRY L - SFX	Chevron U.S.A. Inc.	0.160	929/526	n/a	n/a	n/a		
POLEN WILLIAM R - SFX	Chevron U.S.A. Inc.	0.160	880/419	n/a	n/a	n/a		

Oil and Gas

DEC 17 2018

WV Department of Environmental Protection

4705102148

Freeland Unit #5H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
JJ	5-3-6	MOORE DEBBIE MAE - SFX	Chesapeake Appalachia, LLC	0.125	690/564	24/338 Chesapeake Appalachia, LLC to Statoil USA Onshore Properties, Inc.	30/427 Statoil USA Onshore Properties, Inc to Chevron U.S.A. Inc.	30/461 Chesapeake Appalachia, LLC to Chevron U.S.A. Inc.
		STARKEY ETHEL E AKA STARKEY ETHEL ELAINE - SFX	Chevron U.S.A. Inc.	0.180	871/152	n/a	n/a	n/a
		PETERSON CALLENE M FKA STARKEY CALLENE M - SFX	Chevron U.S.A. Inc.	0.180	871/114	n/a	n/a	n/a
		BROWN REBECCA JEAN - SFX	Chevron U.S.A. Inc.	0.180	873/309	n/a	n/a	n/a
		ROHRER PAULA J - SFX	Chevron U.S.A. Inc.	0.180	873/312	n/a	n/a	n/a
		STRUHAR MARLA K - SFX	Chevron U.S.A. Inc.	0.180	873/321	n/a	n/a	n/a
		SISLEY SARAH FKA SALSBERY SARAH ET VIR - SFX	Chevron U.S.A. Inc.	0.180	871/145	n/a	n/a	n/a
		GIBSON CARALOTTA J FKA SALSBERY CARALOTTA - SFX	Chevron U.S.A. Inc.	0.180	871/138	n/a	n/a	n/a
		SALSBERY JOHN M BY JASON L JACKSON GUARDIAN - SFX	Chevron U.S.A. Inc.	0.180	882/203	n/a	n/a	n/a
		COVERDALE DELLA J ET UX - SFX	Chevron U.S.A. Inc.	0.180	871/173	n/a	n/a	n/a
		SALSBERY TRACY M AKA SALSBERY TRACY - SFX	Chevron U.S.A. Inc.	0.180	871/159	n/a	n/a	n/a
		SALSBERY GINGER L AKA SALSBERY GINGER - SFX	Chevron U.S.A. Inc.	0.180	871/167	n/a	n/a	n/a
		SALSBERY DALE A AKA SALSBERY DALE ADORIN - SFX	Chevron U.S.A. Inc.	0.180	871/315	n/a	n/a	n/a
		MORRIS JODIE R FKA SALSBERY JODIE - SFX	Chevron U.S.A. Inc.	0.180	871/126	n/a	n/a	n/a
		MCGAHA BARBARA L - SFX	Chevron U.S.A. Inc.	0.180	872/98	n/a	n/a	n/a
		KEENER ELAINE M - SFX	Chevron U.S.A. Inc.	0.180	872/101	n/a	n/a	n/a
		RISHER SHERRY KAY - SFX	Chevron U.S.A. Inc.	0.160	803/562	n/a	n/a	n/a
		KNAPSKI SANDRA LEE - SFX	Chevron U.S.A. Inc.	0.180	873/315	n/a	n/a	n/a
		STARKEY BRENT LEE - SFX	Chevron U.S.A. Inc.	0.180	873/318	n/a	n/a	n/a
		STARKEY FORREST ET UX - SFX	Chevron U.S.A. Inc.	0.180	872/154	n/a	n/a	n/a
STANLEY ANITA FKA STARKEY ANITA - SFX	Chevron U.S.A. Inc.	0.180	872/151	n/a	n/a	n/a		
MAYO LINDA D ET VIR - SFX	Chevron U.S.A. Inc.	0.180	872/157	n/a	n/a	n/a		

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Freeland Unit #5H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
		ALBERT CAROL JEAN MALILKA - SFX	Chevron U.S.A. Inc.	0.180	893/268	n/a	n/a	n/a
		SCHARTIGER SHARON L - SFX	Chevron U.S.A. Inc.	0.180	893/205	n/a	n/a	n/a
		SHADDICK JANET - SFX	Chevron U.S.A. Inc.	0.180	893/271	n/a	n/a	n/a
		STARKEY DUANE M ET UX - SFX	Chevron U.S.A. Inc.	0.180	893/265	n/a	n/a	n/a
		ST GEORGE REGINA KAY ET VIR - SFX	Chevron U.S.A. Inc.	0.180	872/104	n/a	n/a	n/a
		STARKEY BETTY LOU - SFX	Chevron U.S.A. Inc.	0.180	872/107	n/a	n/a	n/a
		MADRID PATTIE S FKA SPEAR PATTIE S - SFX	Chevron U.S.A. Inc.	0.180	871/120	n/a	n/a	n/a
KK	5-3-9	THOMAS STEPHEN M ET UX - SFX	TriEnergy Holdings, LLC	0.180	704/374	24/180 TriEnergy Holdings, LLC to NPAR, LLC	756/332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		THOMAS R STEPHEN ET UX - SFX	TriEnergy Holdings, LLC	0.180	704/376	24/180 TriEnergy Holdings, LLC to NPAR, LLC	756/332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
		RESSEGER JOHN - SFX	Chevron U.S.A. Inc.	0.160	891/78	n/a	n/a	n/a
		RESSEGER LAURA VIRGINIA - SFX	Chevron U.S.A. Inc.	0.160	893/183	n/a	n/a	n/a
		RESSEGER WILLIAM ELMER - SFX	Chevron U.S.A. Inc.	0.160	893/186	n/a	n/a	n/a
LL	5-3-10	MIDCAP DOROTHY L	Chevron U.S.A. Inc.	0.16	899/535	n/a	n/a	n/a
MM	5-3-11	HOLMES RALPH ALLEN - SFX	Chevron U.S.A. Inc.	0.18	914/566	n/a	n/a	n/a
NN	5-3-12	HOLMES RALPH ALLEN - SFX	Chevron U.S.A. Inc.	0.18	914/566	n/a	n/a	n/a
PP	5-3-23	HILL LARRY E	Chevron U.S.A. Inc.	0.15	911/588	n/a	n/a	n/a
QQ	5-3-14	CUNNINGHAM GLENN L ET UX	Chevron U.S.A. Inc.	0.15	683/509	n/a	n/a	n/a

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4705 02148 03/08/2019

**Kevin J Cruz**  
Land Representative, AMBU

September 10, 2018

West Virginia D.E.P.  
Office of Oil & Gas  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304-2345

**RE: Freeland 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H**

To Whom It May Concern,

This letter is to confirm that Chevron U.S.A. Inc. has the rights to access minerals under any road along the above referenced laterals. If you should have any further questions or need additional documentation, please feel free to contact me.

Sincerely,

Kevin J Cruz  
Land Representative

Chevron North America Exploration and Production Company  
(a Chevron U.S.A. Inc. division)  
700 Cherrington Parkway Coraopolis, PA 15108  
Tel 412-865-1562  
[kevinjcz@chevron.com](mailto:kevinjcz@chevron.com)

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

Date of Notice Certification: 12/13/18

API No. 47- \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. M05H  
Well Pad Name: Freeland

**Notice has been given:**

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>520432.09</u>
County: <u>Marshall</u>		Northing: <u>4413093.48</u>
District: <u>Clay</u>	Public Road Access: <u>CR 21 Robert Ridge Road</u>	
Quadrangle: <u>Powhatan Point, WV 7.5'</u>	Generally used farm name: <u>Freeland</u>	
Watershed: <u>Short Creek - Ohio River</u>		

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:  *PLEASE CHECK ALL THAT APPLY  <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED  <input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED  <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or  <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)  <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION  <input checked="" type="checkbox"/> 5. PUBLIC NOTICE  <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		<b>OOG OFFICE USE ONLY</b>  <input type="checkbox"/> RECEIVED/ NOT REQUIRED  <input type="checkbox"/> RECEIVED  <input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED  <input checked="" type="checkbox"/> RECEIVED  <input checked="" type="checkbox"/> RECEIVED  <input checked="" type="checkbox"/> RECEIVED
--	--	--

**Required Attachments:**

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

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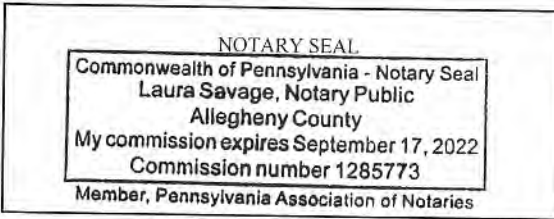
**Certification of Notice is hereby given:**

THEREFORE, I Jenny Butchko, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

*Jenny Butchko*

Well Operator: Chevron Appalachia, LLC  
By: Jenny Butchko  
Its: Permitting Team Lead  
Telephone: 412-865-1533

Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403  
Email: JZYK@chevron.com



Commonwealth of Pennsylvania  
County of Allegheny  
Subscribed and sworn before me this 24<sup>th</sup> day of September 2018  
Laura Savage Notary Public  
My Commission Expires September 17, 2022

**Oil and Gas Privacy Notice:**

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

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

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

Date of Notice: 11/15/18 Date Permit Application Filed: 12/14/18

Notice of:

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

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

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

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

SURFACE OWNER(s)

Name: Joseph L. Freeland and Debra J. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 26155

Name: Joseph L. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 260155

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

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

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

SURFACE OWNER(s) (Impoundments or Pits)

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

COAL OWNER OR LESSEE

Name: Consol Mining Company, LLC  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

COAL OPERATOR

Name: Murray Energy Corp.  
Address: 46226 National Road  
St. Clairsville, OH 43950

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

Name: See Attachment  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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

\*Please attach additional forms if necessary

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**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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

**Time Limits and Methods for Filing Comments.**

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

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

**Comment Requirements**

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

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

**Permit Denial or Condition**

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

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

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

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

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WW-6A  
(8-13)

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_ **03/08/2019**  
OPERATOR WELL NO. MOSH  
Well Pad Name: Freeland

**4705102148**

**Notice is hereby given by:**

Well Operator: Chevron Appalachia, LLC  
Telephone: 412-865-1533  
Email: JZYK@chevron.com

Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403

**Oil and Gas Privacy Notice:**

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

*Jenny Butert*

Commonwealth of Pennsylvania - Notary Seal  
Laura Savage, Notary Public  
Allegheny County  
My commission expires September 17, 2022  
Commission number 1285773  
Member, Pennsylvania Association of Notaries

Commonwealth of Pennsylvania  
County of Allegheny  
Subscribed and sworn before me this 24<sup>th</sup> day of September 2018.  
Laura Savage Notary Public  
My Commission Expires September 17, 2022

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Attachment to WW-6A

4705102148

API No. 47- \_\_\_\_ - \_\_\_\_\_

OPERATOR WELL NO. M05H

Well Pad Name: Freeland

- SURFACE OWNER**  
Name:  
Address:
- COAL OWNER OR LESSEE**  
Name:  
Address:
- COAL OPERATOR**  
Name:  
Address:
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**  
Name: Joseph L. Freeland ET UX  
Address: 813 Clearview Terrace \ /  
New Martinsville, WV 26155
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**  
Name: Cathy J. and Carl F Petrucci, Jr.  
Address: 863 Petrucci Lane \ /  
Moundsville, WV 26041
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**  
Name: Norman L. Darrow, ET UX \ /  
Address: 97 Old Homestead Lane  
Moundsville, WV 26041
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**  
Name:  
Address:
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**  
Name:  
Address:

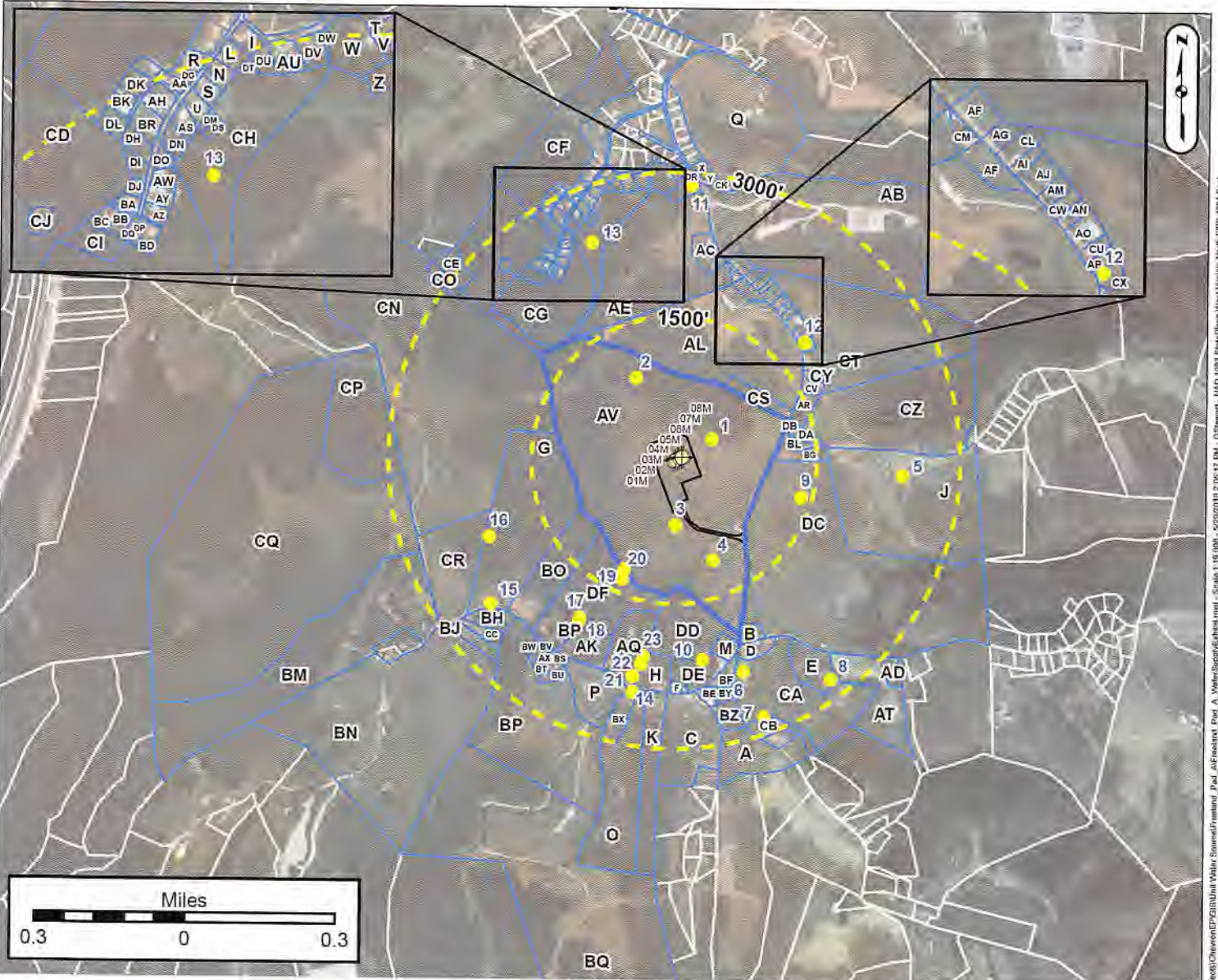
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# WATER SUPPLY EXHIBIT 4705102 03/08/2019 FREELAND PAD A



### LOT OWNERS

Lot #	Parcel ID	Label	Owner	Parcel ID	Label	Owner	Parcel ID	Label	Owner	Parcel ID	Label	Owner
1	75-04 7800130001	AD	WILKINS ERIC W	75-04 7800130002	AE	WILKINS ERIC W	75-04 7800130003	AF	WILKINS ERIC W	75-04 7800130004	AG	WILKINS ERIC W

Surface Owner: JOSEPH FREELAND  
 Oil/Gas Owner: JOSEPH FREELAND  
 Well Operator: CHEVRON APPALACHIA, LLC  
 Address: 700 CHERRINGTON PARKWAY  
 CORAOPOLIS, PA 15108  
 Phone: 724-564-3700

County: MARSHALL  
 Township: MOUNDSVILLE, WV  
 Groundwater & Environmental Surveyor: SERVICES, INC.  
 Address: 301 COMMERCE PARK DR  
 CRANBERRY TOWNSHIP, PA 16066  
 Phone: 800-267-2549

NOTICE: THE INTENT OF THIS EXHIBIT IS TO IDENTIFY EXISTING WATER SUPPLIES IN THE VICINITY OF A PROPOSED GAS WELL, AND IS NOT A COMPLETE BOUNDARY SURVEY. PROPERTY LINES AND OWNER INFORMATION WERE OBTAINED FROM DEEDS, TAX RECORDS, AERIAL PHOTOGRAPHY, GIS, AND FIELD SURVEYED EVIDENCE.



Water Supply Exhibit  
Freeland Pad

03/08/2019

4705102148

No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
1	FREELAND JOSEPH L ET UX	Spring	1207	3599 ROBERTS RIDGE	304-771-3000
2	FREELAND JOSEPH L ET UX	Spring	1140	3599 ROBERTS RIDGE	304-771-3000
3	FREELAND JOSEPH L ET UX	Spring	1239	3599 ROBERTS RIDGE	304-771-3000
4	FREELAND JOSEPH L ET UX	Spring	1216	3599 ROBERTS RIDGE	304-771-3000
5	HIGGINBOTHAM STEVEN L ET UX	Spring	1164	211 FALLEN TIMBER LANE	304-845-5357
6	MASON LEMONT & RHONDA L	Pond	1326	4274 ROBERTS RDGE ROAD	304-845-9182 / 304-559-5535 / 304-639-5338
7	MASON LEMONT & RHONDA L	Stream	1288	4274 ROBERTS RDGE ROAD	304-845-9182 / 304-559-5535 / 304-639-5338
8	MASON LEMONT & RHONDA L	Stream	1229	4274 ROBERTS RDGE ROAD	304-845-9182 / 304-559-5535 / 304-639-5338
9	PETRUCCI CATHY J & CARL F JR	Well	1264	863 PETRUCCI LANE	304-843-1791
10	ROBERTS RIDGE VOL FIRE DEPT	Spring	1320*	23 KANSAS RIDGE ROAD	304-559-3241
11	THOMPSON PHILLIP E & JANE	Well	1260	2823 ROBERTS RIDGE RODD	304-845-4818
12	YOHO DAVID BOYD ET UX	Spring	1315	3202 ROBERTS RIDGE ROAD	304-843-1625 or 304-639-2114
13	YOUNG MICHAEL WILLIAM	Stream	1136	332 SENTIMENTAL DRIVE	304-845-7609
14	DANAHEY SHAWN T & KELLY J	Well	1323*	212 KANSAS RIDGE LANE	304-215-0385
15	DERROW NORMAN L & BIBIANA	Well	1266*	97 OLD HOMESTEAD LANE	304-845-6769

No.	SUPPLY COORDINATES	01M	02M	03M	04M	05M	06M	07M	08M
1	39°52'05.45988000"N 80°45'35.69004000"W	451	434	418	405	386	371	360	347
2	39°52'11.61012000"N 80°45'46.06992000"W	947	948	950	951	951	953	954	956
3	39°51'56.54016000"N 80°45'40.34016000"W	676	682	688	694	704	710	716	723
4	39°51'52.99992000"N 80°45'35.16984000"W	1,120	1,120	1,120	1,121	1,124	1,125	1,127	1,129
5	39°52'02.17992000"N 80°45'09.90000000"W	2,403	2,388	2,372	2,361	2,345	2,332	2,322	2,310
6	39°51'41.64480000"N 80°45'30.77640000"W	2,316	2,317	2,317	2,319	2,323	2,324	2,326	2,328
7	39°51'37.06560000"N 80°45'27.90720000"W	2,828	2,828	2,829	2,830	2,833	2,834	2,835	2,837
8	39°51'41.01840000"N 80°45'19.02240000"W	2,811	2,807	2,802	2,800	2,798	2,794	2,792	2,790
9	39°51'59.73120000"N 80°45'23.52960000"W	1,384	1,370	1,357	1,347	1,334	1,323	1,314	1,304
10	39°51'42.75000000"N 80°45'36.29160000"W	2,099	2,103	2,107	2,111	2,117	2,121	2,125	2,129
11	39°52'31.55016000"N 80°45'39.21984000"W	2,869	2,862	2,855	2,849	2,840	2,834	2,829	2,823
12	39°52'15.61440000"N 80°45'23.52960000"W	1,834	1,818	1,802	1,790	1,772	1,758	1,747	1,735
13	39°52'25.44996000"N 80°45'52.44012000"W	2,429	2,429	2,429	2,429	2,427	2,427	2,427	2,427
14	39°51'39.31200000"N 80°45'45.64800000"W	2,450	2,510	2,475	2,467	2,458	2,486	2,495	2,502
15	39°51'48.06000000"N 80°46' 04.92600000"W	2,434	2,536	2,479	2,466	2,450	2,497	2,511	2,523

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\*ELEVATIONS SHOWN ARE COLLECTED IN THE FIELD. ALL OTHER ELEVATIONS DETERMINED VIA GOOGLE EARTH.



Water Supply Exhibit  
Freeland Pad

03/08/2019

4705102148

No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
16	DERROW NORMAN L & BIBIANA	Spring	1108*	97 OLD HOMESTEAD LANE	304-845-6769
17	DERROW NORMAN L ET UX	Pond	1232*	97 OLD HOMESTEAD LANE	304-845-6769
18	DERROW NORMAN L ET UX	Pond	1232*	97 OLD HOMESTEAD LANE	304-845-6769
19	DERROW NORMAN L ET UX	Spring	1097*	97 OLD HOMESTEAD LANE	304-845-6769
20	DERROW NORMAN L ET UX	Stream	1088*	97 OLD HOMESTEAD LANE	304-845-6769
21	MASON JAMES E II & CARRIE A	Spring	1292*	323 KANSAS RIDGE ROAD	304-843-5211
22	ROBINSON MARK A ET UX	Spring	1276*	197 KANSAS RIDGE ROAD	304-845-1664
23	ROBINSON MARK A ET UX	Spring	1235*	197 KANSAS RIDGE ROAD	304-845-1664

No.	SUPPLY COORDINATES	01M	02M	03M	04M	05M	06M	07M	08M
16	39°51'54.98280000"N 80°46' 05.36880000"W	2,097	2,202	2,144	2,131	2,114	2,162	2,177	2,189
17	39°51'46'.75680000"N 80°45'52.92720000"W	1,920	2,006	1,957	1,946	1,933	1,973	1,985	1,995
18	39°51'46'.49400000"N 80°45'53.03520000"W	1,947	2,033	1,984	1,974	1,960	2,000	2,012	2,022
19	39°51'50.80680000"N 80°45'47.37960000"W	1,360	1,439	1,394	1,384	1,372	1,408	1,419	1,429
20	39°51'51.82200000"N 80°45'47.13120000"W	1,258	1,338	1,292	1,282	1,270	1,307	1,318	1,327
21	39°51'40.91760000"N 80°45'45.67680000"W	2,290	2,351	2,315	2,308	2,299	2,327	2,336	2,343
22	39°51'42.18120000"N 80°45'44.55000000"W	2,150	2,208	2,174	2,167	2,158	2,186	2,194	2,201
23	39°51'42.99120000"N 80°45'44.33040000"W	2,066	2,125	2,091	2,083	2,075	2,102	2,110	2,117

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03/08/2019

STATE OF WEST VIRGINIA **4705102148**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF INTENT TO DRILL

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

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 11/15/18 **Date Permit Application Filed:** 12/14/18

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: Joseph L. Freeland and Debra J. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 26155

Name: Joseph L. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 26155

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>520432.09</u>
County: <u>Marshall</u>	Northing: <u>4413093.48</u>
District: <u>Clay</u>	Public Road Access: <u>CR 21 Robert Ridge Road</u>
Quadrangle: <u>Powhatan Point, WV 7.5'</u>	Generally used farm name: <u>Freeland</u>
Watershed: <u>Short Creek - Ohio River</u>	

**This Notice Shall Include:**

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

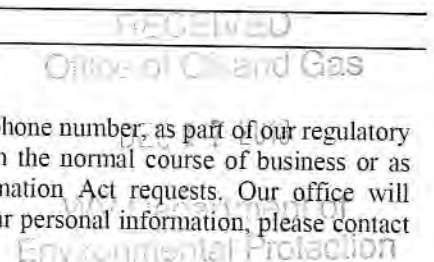
**Notice is hereby given by:**

Well Operator: Chevron Appalachia, LLC  
Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Telephone: 412-865-1533  
Email: JZYK@chevron.com  
Facsimile: 412-865-2403

Authorized Representative: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

**Oil and Gas Privacy Notice:**

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



4705102148 03/08/2019

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:** 11/15/18 **Date Permit Application Filed:** 12/14/18

**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: Joseph L. Freeland and Debra J. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 26155

Name: Joseph L. Freeland  
Address: 813 Clearview Terrace  
New Martinsville, WV 26155

**Notice is hereby given:**

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

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>520432.09</u>
County:	<u>Marshall</u>	UTM NAD 83 Northing:	<u>4413093.48</u>
District:	<u>Clay</u>	Public Road Access:	<u>CR 21 Robert Ridge Road</u>
Quadrangle:	<u>Powhatan Point, WV 7.5'</u>	Generally used farm name:	<u>Freeland</u>
Watershed:	<u>Short Creek - Ohio River</u>		

**This Notice Shall Include:**

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

Well Operator: Chevron Appalachia, LLC  
Telephone: 412-865-1533  
Email: JZYK@chevron.com

Address: 700 Cherrington Parkway  
Coraopolis, PA 15108  
Facsimile: 412-865-2403

**Oil and Gas Privacy Notice:**

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

Office of Oil and Gas

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WV Department of  
Environmental Protection

**4705102148**

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, Joseph L. Freeland, 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: <u>West Virginia</u>	UTM NAD 83 Easting: <u>520432.09</u>
County: <u>Marshall</u>	Northing: <u>4413093.48</u>
District: <u>Clay</u>	Public Road Access: <u>CR 21 Robert Ridge Road</u>
Quadrangle: <u>Powhatan Point, WV 7.5'</u>	Generally used farm name: <u>Freeland</u>
Watershed: <u>Short Creek - Ohio River</u>	

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: <u>Joseph L. Freeland</u></p> <p>Print Name: <u>JOSEPH L. FREELAND</u></p> <p>Date: <u>11-20-18</u></p>
	<p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>

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DEC 17 2018

**Oil and Gas Privacy Notice:**

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

**4705102148**

**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, Mason Smith, 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: <u>West Virginia</u>	UTM NAD 83	Eastings: <u>520432.092</u>
County: <u>Marshall</u>	Northings: <u>4413093.478</u>	
District: <u>Clay</u>	Public Road Access: <u>Robers Ridge Road</u>	
Quadrangle: <u>Powhatan Point 7.5'</u>	Generally used farm name: <u>Freeland</u>	
Watershed: <u>Upper Ohio-Beaver</u>		

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.

<p>*Please check the box that applies</p> <p><input type="checkbox"/> SURFACE OWNER</p> <p><input type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input checked="" type="checkbox"/> COAL OPERATOR</p> <p><input type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p><b>FOR EXECUTION BY A NATURAL PERSON</b></p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p> <p><b>FOR EXECUTION BY A CORPORATION, ETC.</b></p> <p>Company: <u>Murray American Energy Inc</u></p> <p>By: <u>Mason Smith</u></p> <p>Its: <u>Coal, oil &amp; gas relations manager</u></p> <p>Signature: <u>Mason Smith</u></p> <p>Date: <u>10-29-18</u></p>
--	---

**Oil and Gas Privacy Notice:**

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

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DEC 10 2018





## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

1900 Kanawha Boulevard East • Building Five • Room 110  
Charleston, West Virginia 25305-0430 • (304) 558-3505

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

November 2, 2018

Jill M. Newman  
Deputy Commissioner

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

Subject: DOH Permit for the Freeland Pad, Marshall County  
Freeland M05H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2018-0862 for the subject site to Chevron North America Exploration and Production Company for access to the State Road for the well pad located off of Marshall County Route 21 SLS.

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

Very Truly Yours,

Gary K. Clayton, P.E.  
Regional Maintenance Engineer  
Central Office Oil & Gas Coordinator

Cc: Nikolai Softcheck  
Chevron Appalachia, LLC  
CH, OM, D-6  
File

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DEC 17 2018

WV Department of  
Environmental Protection

**Hydraulic Fracturing Fluid Additives**

Supplier	Name	Purpose
Universal	7.5% HCl Acid	Acid - To open perforations
Universal	Unislick ST50	Friction Reducer for Water and Brine (Anionic)
Universal	Scale Inhibitor A	Scale Inhibitor
Universal	Iron Control A	Iron Control
Universal	Unihib G	Corrosion Inhibitor for Acid
Universal	K-Bac 1020	Biocide/Bactericide
Universal	CMHPG (Polyfrac Gel)	Gel
Universal	LEB 10X	Gel Breaker
Universal	100 Mesh White Sand	Proppant
Universal	40-70 Mesh White Sand	Proppant

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Office of Oil and Gas

DEC 17 2018

WV Department of  
Environmental Protection

# FREELAND WELL PAD EROSION AND SEDIMENT CONTROL PLAN

3599 RIDGE ROAD (COUNTY ROUTE 21)  
CLAY DISTRICT, MARSHALL COUNTY, WEST VIRGINIA

**APPROVED  
WVDEP OOG**

2/26/2019

PREPARED FOR:

**CHEVRON APPALACHIA, LLC**  
700 CHERRINGTON PARKWAY  
CORAOPOLIS, PA 15108

**CONSULTANTS**

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.  
4000 TRIANGLE LANE, SUITE 200  
EXPORT, PA 15832  
PHONE: 724-327-5200

CIVIL/SITE ENGINEER CONTACT: JOSH MARGREE  
EMAIL ADDRESS: jmcgargee@cecinc.com  
GEO TECHNICAL ENGINEER CONTACT: AARON LAVAGE  
EMAIL ADDRESS: alavage@cecinc.com

**SITE COORDINATES AND WATERSHED**

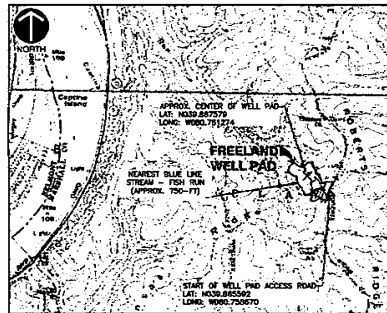
START OF WELL PAD ACCESS ROAD  
LATITUDE: 39.265592° N, LONGITUDE: 80.756670° W

APPROXIMATE CENTER OF WELL PAD  
LATITUDE: 39.268757° N, LONGITUDE: 80.761274° W

\*BASED ON NAD 83, WEST VIRGINIA NORTH ZONE

WATERSHED NAME: UPPER OHIO SOUTH  
RECEIVING STREAM: UNNAMED TRIBUTARIES TO FISH RUN

Wellhead No.	Northing	Eastng	Latitude (North)	Longitude (West)
01M	50093.5170	161440.0046	39.267565	80.762296
02M	50063.5532	161444.5541	39.267517	80.761243
03M	50069.6096	161450.2615	39.267628	80.761194
04M	50061.6155	161451.9800	39.267617	80.761148
05M	50062.7017	161453.7365	39.267621	80.761062
06M	50062.7147	161454.4440	39.267622	80.761016
07M	50063.7943	161456.2715	39.267693	80.760990
08M	50063.8403	161457.0990	39.267684	80.760904
09M	50063.9181	161458.4417	39.267686	80.761264
10M	50063.9843	161459.1492	39.267677	80.761278
11M	50064.3105	161459.8964	39.267678	80.761197
04L	50064.8347	161462.0241	39.267720	80.761246
05L	50065.2029	161457.1516	39.267721	80.761090
06L	50064.2491	161458.0731	39.267742	80.761043
07L	50064.7292	161457.2064	39.267763	80.760998
08L	50064.5658	161457.5043	39.267757	80.761237
09L	50064.7616	161458.1318	39.267748	80.761151
10L	50064.8258	161458.2592	39.267820	80.761145
11L	50064.7040	161458.2867	39.267819	80.761087



SITE LIMITS OF DISTURBANCE/IMPACTS TO NOW/FORMER LANDOWNER - JOSEPH L. FREELAND (JC)

TOTAL AREA	22.4
WOODED AREA DISTURBED	1.7
WELL PAD	12.7
ACCESS ROAD	3.1
STOCKPILE AREA	6.6

SITE LOCATION MAP  
SCALE IN FEET  
0 2000 4000

REFERENCE  
U.S.G.S. 7.5' TOPOGRAPHIC MAP, POPULATION POINT QUADRANGLE, CHE-14, DATED: 1984, PHOTOGRAPHED: 1972 AND 1978, PHOTOSPICATED: 1984.

**WETLANDS WITHIN 100 LF OF THE LIMIT OF DISTURBANCE (SUBJECT TO WETLAND WAIVER REQUEST)**

WETLAND 1A (PEM) - 7 FT FROM LOD  
WETLAND 1B (PEM) - 5 LF FROM LOD  
WETLAND 2 (PSS) - 2 LF FROM LOD  
WETLAND 4 (PEM/PSS) - 10 LF FROM LOD

**LEGEND**

	EXISTING PROPERTY LINE		PROPOSED LIMIT OF DISTURBANCE		PROPOSED COMPOST FILTER SOCK TRAP
	EXISTING INDEX CONTOUR		PROPOSED EDGE OF ACCESS ROAD/PAD		PROPOSED 10-IN COMPOST FILTER SOCK
	EXISTING INTERMEDIATE CONTOUR		PROPOSED GRAVEL		PROPOSED 24-IN COMPOST FILTER SOCK
	EXISTING PAVED ROADWAY		PROPOSED ASPHALT PAVEMENT		PROPOSED 33-IN COMPOST FILTER SOCK
	EXISTING GRAVELLED ROADWAY		PROPOSED CONCRETE CURB		PROPOSED 36-IN COMPOST CONSTRUCTION FENCE
	EXISTING STRUCTURE/BUILDING		PROPOSED WELLHEAD AND CELLAR		PROPOSED ROCK CONSTRUCTION ENTRANCE
	EXISTING STREAM		PROPOSED ROCK CONTOUR		PROPOSED INLET PROTECTION
	STREAM AND WETLAND DELINEATION BOUNDARY		PROPOSED INTERMEDIATE CONTOUR		PROPOSED EROSION CONTROL BLANKET
	EXISTING WETLAND		PROPOSED SPOT ELEVATION		
	EXISTING OVERHEAD ELECTRIC LINE		PROPOSED CUT/FILL LINE		
	EXISTING WATERLINE		PROPOSED CHANNEL		
	EXISTING TELECOMMUNICATION LINE		PROPOSED STORMWATER CULVERT		
	EXISTING STORMWATER CULVERT		PROPOSED INLET		
	EXISTING TREE LINE		PROPOSED RIPRAP APRON		
	EXISTING WATER METER		PROPOSED UNDERDRAIN		
	EXISTING UTILITY POLE				
	EXISTING INLET				

**REFERENCES**

- STREAMS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 03/24/2017.
- UNDERGROUND UTILITIES LOCATED BY A GEOPHYSICAL SURVEY CONDUCTED BY THE GEOPHYSICS LTD. DATED 05/23/2017 TO 05/25/2017.
- UTILITY FEATURES SURVEYED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 06/09/2017 TO 06/12/2017.
- TOPOGRAPHY SURVEYED VIA UNMANNED AERIAL VEHICLE (UAV) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/16/2018
- PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.
- BACKGROUND AERIAL IMAGE FROM GOOGLE EARTH PRO, DATED 2016.

DWG. NO.	SHEET TITLE	INCLUDED	LAST REVISED
CS 000	COVER SHEET	X	11/14/2018
ES 050	EXISTING TOPOGRAPHIC PLAN	X	11/14/2018
ES 100	OVERALL EROSION AND SEDIMENT CONTROL PLAN	X	11/14/2018
ES 101	EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)	X	11/14/2018
ES 102	EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)	X	11/14/2018
ES 103	EROSION AND SEDIMENT CONTROL DETAILS (1 OF 6)	X	11/14/2018
ES 104	EROSION AND SEDIMENT CONTROL DETAILS (2 OF 6)	X	11/14/2018
ES 105	EROSION AND SEDIMENT CONTROL DETAILS (3 OF 6)	X	11/14/2018
ES 106	EROSION AND SEDIMENT CONTROL DETAILS (4 OF 6)	X	11/14/2018
ES 107	EROSION AND SEDIMENT CONTROL DETAILS (5 OF 6)	X	11/14/2018
ES 108	EROSION AND SEDIMENT CONTROL DETAILS (6 OF 6)	X	11/14/2018
ES 109	WELL PAD PLAN AND CROSS-SECTIONS	X	11/14/2018
ES 110	ACCESS ROAD PLAN AND PROFILE	X	11/14/2018
ES 111	ACCESS ROAD CROSS-SECTIONS	X	11/14/2018
ES 112	STOCKPILE CROSS-SECTIONS	X	11/14/2018
GE 500	GEO TECHNICAL SURFACE SUMMARY	X	11/14/2018
GE 501	GEO TECHNICAL SUBSURFACE CROSS-SECTIONS	X	11/14/2018
GE 502	GEO TECHNICAL NOTES AND TABLES	X	11/14/2018
GE 503	GEO TECHNICAL DETAILS	X	11/14/2018
RS 101	RSS PLAN AND ELEVATION VIEW (1 OF 2)	X	11/14/2018
RS 102	RSS PLAN AND ELEVATION VIEW (2 OF 2)	X	11/14/2018
RS 103	RSS CROSS-SECTION (1 OF 3)	X	11/14/2018
RS 104	RSS CROSS-SECTION (2 OF 3)	X	11/14/2018
RS 105	RSS CROSS-SECTION (3 OF 3)	X	11/14/2018
RS 106	RSS SPECIFICATIONS AND QUANTITIES	X	11/14/2018
RS 107	RSS DETAILS	X	11/14/2018
PC 601	SITE PLAN WITH AERIAL	X	11/14/2018
PC 602	POST-CONSTRUCTION RECLAMATION PLAN	X	11/14/2018
PC 603	POST-CONSTRUCTION RECLAMATION DETAILS	X	11/14/2018

**CEC**  
Civil & Environmental Consultants, Inc.  
4000 Triangle Lane, Suite 200 - Export, PA 15832  
724-327-5200 - 400-849-9810  
www.cecinc.com



REVISION RECORD

NO.	DATE	DESCRIPTION
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PREPARED FOR:  
**CHEVRON APPALACHIA, LLC**  
700 CHERRINGTON PARKWAY  
CORAOPOLIS, PA 15108

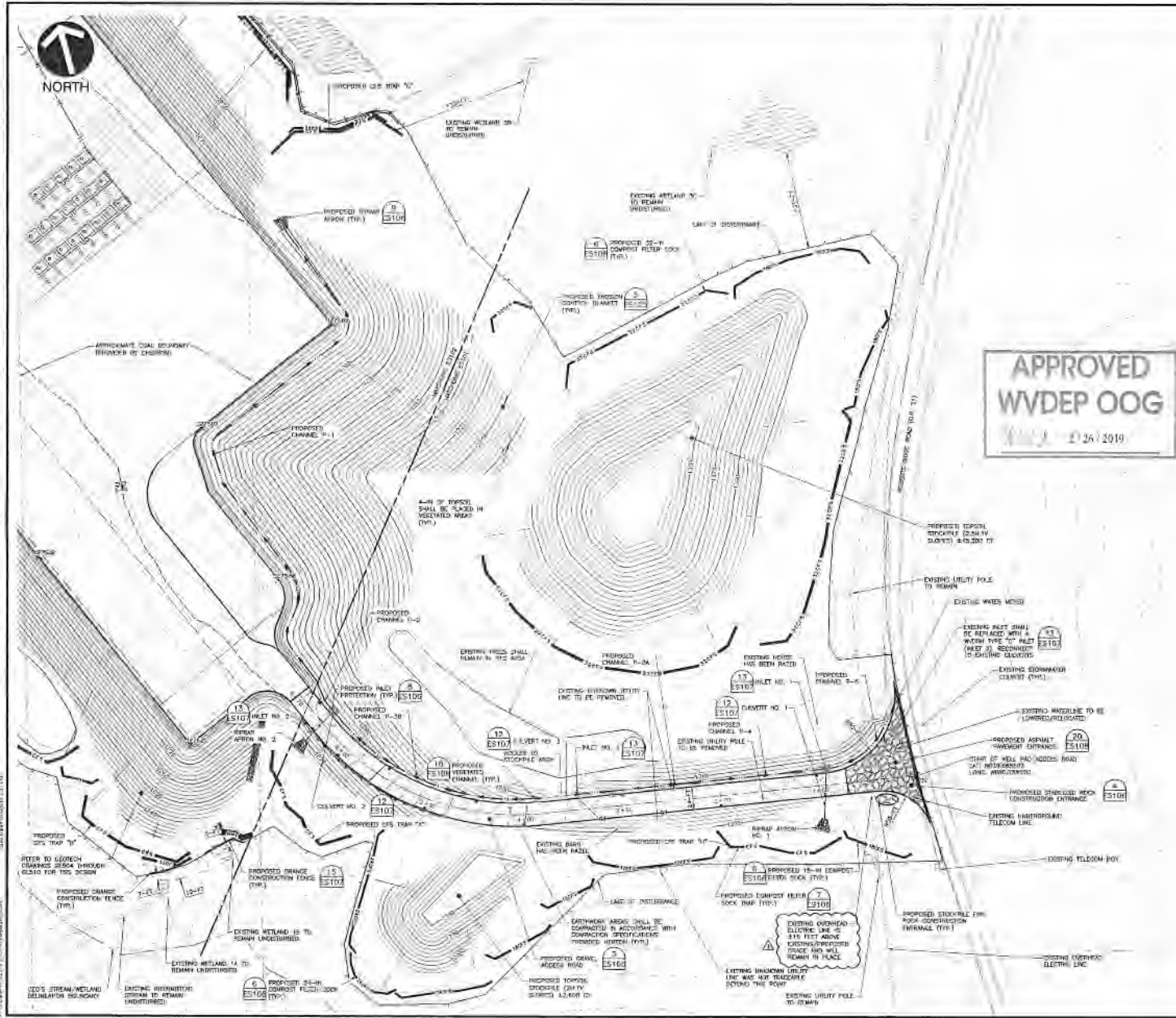
**FREELAND WELL PAD**  
CLAY DISTRICT  
MARSHALL COUNTY, WEST VIRGINIA

COVER SHEET

**MISS UTILITY OF WEST VIRGINIA**  
1-800-245-4848  
West Virginia State Line  
(Section 10V, Chapter 24-C requires that you call two business days before you dig in the state of West Virginia.)  
**IT'S THE LAW**

Project Number:	122040
Drawing Scale:	1"=50'
Date Issued:	11/16/2018
Index Number:	
Drawn By:	JKG
Checked By:	JLM
Project Manager:	JMS

CS 000



**LEGEND**

[Symbol]	EXISTING PROPERTY LINE
[Symbol]	EXISTING INTERMEDIATE CONTOUR
[Symbol]	EXISTING PAVED ROADWAY
[Symbol]	EXISTING GRAVELLED ROADWAY
[Symbol]	EXISTING STRUCTURE/PAVING
[Symbol]	EXISTING ZONING
[Symbol]	STREAM AND WETLAND DELINEATION BOUNDARY
[Symbol]	EXISTING WETLAND
[Symbol]	EXISTING WETLAND BUFFER LINE
[Symbol]	EXISTING WASTEWATER
[Symbol]	EXISTING TELECOMMUNICATION LINE
[Symbol]	EXISTING STORMWATER GULLY
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING WATER METER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING ALLEY
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED EDGE OF ACCESS ROAD/PAV
[Symbol]	PROPOSED DRIVE
[Symbol]	PROPOSED ASPHALT PAVEMENT
[Symbol]	PROPOSED CONCRETE SLAB
[Symbol]	PROPOSED WELLSHAFT AND TELLAR
[Symbol]	PROPOSED INDEX ELEVATION
[Symbol]	PROPOSED INTERMEDIATE CONTOUR
[Symbol]	PROPOSED SPOT ELEVATION
[Symbol]	PROPOSED TOP-UP LINE
[Symbol]	PROPOSED COMPACT FILTER SOCK TRAP
[Symbol]	PROPOSED 18-IN COMPACT FILTER SOCK
[Symbol]	PROPOSED 24-IN COMPACT FILTER SOCK
[Symbol]	PROPOSED 32-IN COMPACT FILTER SOCK
[Symbol]	PROPOSED CHANNEL CONSTRUCTION (FRICT)
[Symbol]	PROPOSED ROOF CONSTRUCTION ENTRANCE
[Symbol]	PROPOSED INLET PROTECTION
[Symbol]	PROPOSED CHANNEL
[Symbol]	PROPOSED STORMWATER GULLY
[Symbol]	PROPOSED ALLEY
[Symbol]	PROPOSED WETLAND BUFFER
[Symbol]	PROPOSED UNDERDRAIN
[Symbol]	PROPOSED EROSION CONTROL BLANKET

**APPROVED**  
**WVDEP OOG**  
NOV 26 2019

- STREAM AND WETLAND NOTES**
1. WETLAND VALUES ARE BEING REQUESTED FOR THE FOLLOWING FOUR (4) WETLANDS THAT ARE LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE: WETLANDS 1A, 1B, 2, AND A.
  2. THE STREAMS SHOWN HEREON OUTSIDE THE LIMIT OF DISTURBANCE ARE ENDEMIC OR INTERMITTENT AS SUCH, A WADOT IS NOT BEING REQUESTED FOR PERMANENT STREAMS.
  3. ELEVATIONS SHOWN HEREON ARE MEASURED FROM THE TOP OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

- COMPACTION SPECIFICATIONS**
1. PLACE ONE FULL MATERIAL LAYER COMPACTION EQUIPMENT WITH GREATER THAN 10-IN WHEELS IN COMPACTED LOTS NOT EXCEEDING 12 FEET. THERE IS A MINIMUM OF 50 PERCENT OF THE MAXIMUM DRY DENSITY WITHIN 48 FEET OF THE OPTIMUM MOISTURE CONTENT. DETERMINE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D998 (STANDARD PRACTICE).
  2. ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED IMPROVED SOIL SLOPE (LESS AREA, REFER TO DRAWINGS SHEET THROUGH SCALE FOR ADDITIONAL INFORMATION).

- REFERENCES**
1. STREAMS AND WETLANDS LOCATED BY CHEV & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
  2. UNDERGROUND UTILITIES LOCATED BY A SURVEYORIAL SURVEY CONDUCTED BY PRO SERVICES LTD. DATED 04/23/2017 TO 05/23/2017.
  3. UTILITY RECORDS SUBMITTED BY CHEV & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/06/2017 TO 05/17/2017.
  4. SURVEYORIAL SURVEY OF UNDERGROUND AERIAL VEHICLE (UAV) BY CHEV & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/16/2018.
  5. PROPERTY BOUNDARIES WERE PROVIDED BY CHEVON.



MISS UTILITY OF WEST VIRGINIA  
1-800-245-4848  
One Shepherd State Lane  
Bethesda, MD 20814  
Section 304 Chapter 24-C requires that you call two business days before you dig in the state of West Virginia.  
**IT'S THE LAW**



**CEC**  
Chev & Environmental Consultants, Inc.  
1000 Thompson Lane, Suite 200 • Export, PA 15622  
724.777.3335 fax: 724.777.3195



**REVISION RECORD**

NO.	DATE	BY	DESCRIPTION
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**FREE LAND WELL PAD**  
CLAY COUNTY, MARSHALL COUNTY, WEST VIRGINIA  
PREPARED FOR:  
**CHEVRON APALACHIA, LLC**  
700 CHERYLINGTON PARKWAY  
COURT HOUSE, PA 15008

**EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)**  
Project Number: 212202  
Drawing Title: 212202-01  
Issue Number: 311020201  
Sheet No: 212  
Project Manager: JAS  
**ES 101**



APPROXIMATE DRAINAGE BOUNDARY (DERIVED BY CONTOUR)

APPROXIMATE LOCATION OF EXISTING WETLANDS & WETLANDS TO BE RESTORED IN ACCORDANCE WITH SECTION 404(b)(1) OF FEDERAL REGULATIONS (33 CFR 329.2-1) TO BEACH UNDEVELOPED EXISTING WETLANDS (SHELF AND FOREBANK)

EXISTING WETLAND SHALL BE COMPACTED IN ACCORDANCE WITH COMPACTING AND RESTORATION REQUIREMENTS (33 CFR 329.2-1)

DESIGN FOR PLACEMENT OF PROPOSED WETLANDS SHALL BE USED FROM THIS SHEET (SEE PLAN)

PROPOSED TROPICAL STORMWATER STORAGE (200,000 CY)

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE SHALL BE INSTALLED UPSTREAM OF ALL PUMP STATIONS AND CONDUIT ENTRIES

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

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PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

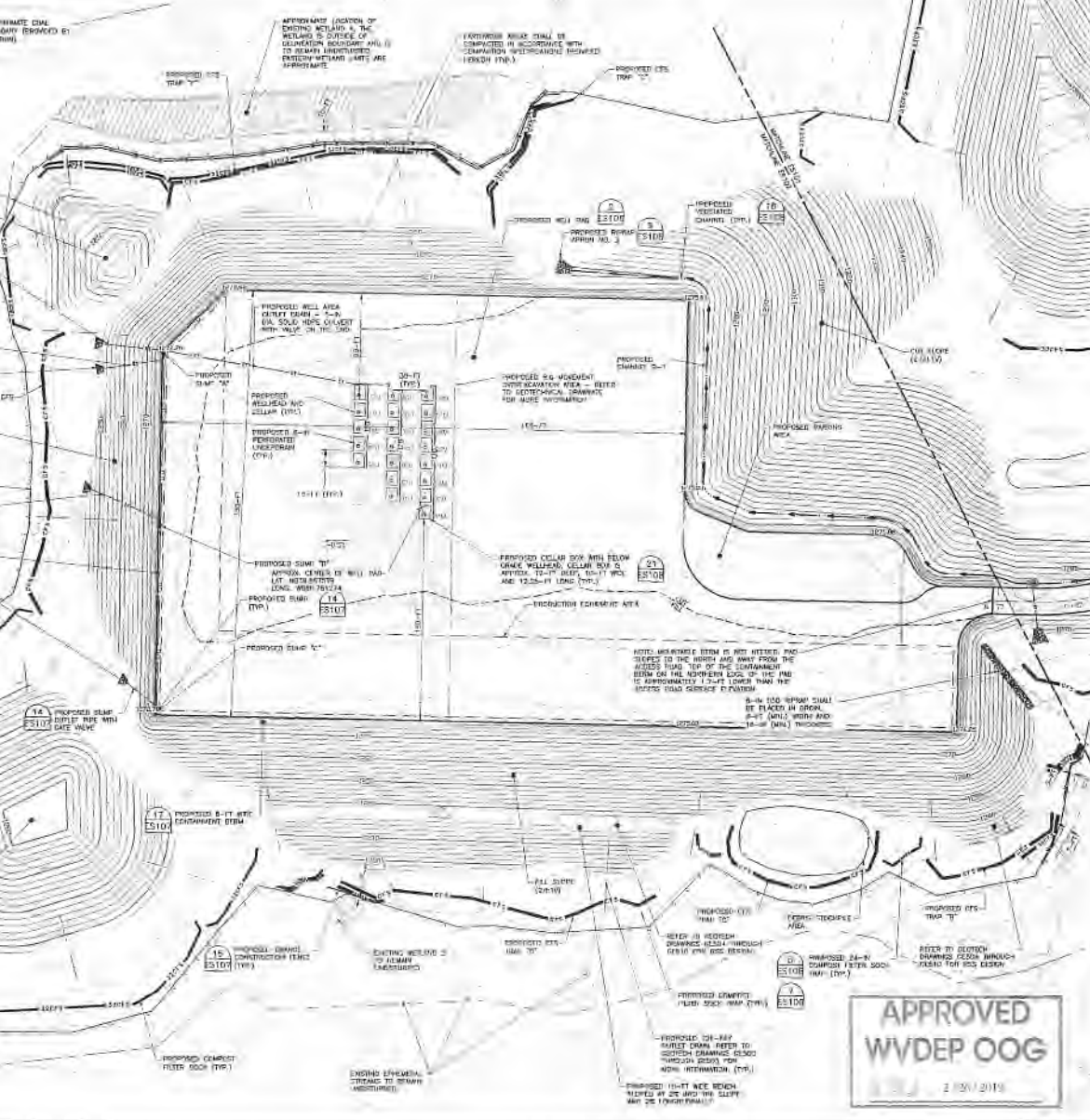
PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE

PROPOSED 36" DIAM. VALVE WITH WASTEWATER GATE VALVE



**LEGEND**

[Symbol]	EXISTING PROPERTY LINE
[Symbol]	EXISTING INDEX CONTOUR
[Symbol]	EXISTING INTERMEDIATE CONTOUR
[Symbol]	EXISTING PAVED ROADWAY
[Symbol]	EXISTING UNPAVED ROADWAY
[Symbol]	EXISTING STRUCTURE/BUILDING
[Symbol]	EXISTING STREAM
[Symbol]	STREAM AND WETLAND DELINEATION BOUNDARY
[Symbol]	EXISTING WETLAND
[Symbol]	EXISTING WETLAND ELECTRIC LINE
[Symbol]	EXISTING WATERLINE
[Symbol]	EXISTING TELECOMMUNICATION LINE
[Symbol]	EXISTING STORMWATER CONDUIT
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING WATER METER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING PALE
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED EDGE OF ACCESS ROAD/PAVEMENT
[Symbol]	PROPOSED ADJACENT FOOTING
[Symbol]	PROPOSED CONCREMENT BEAM
[Symbol]	PROPOSED WELLHEAD AND CELLAR
[Symbol]	PROPOSED WELLS CONTOUR
[Symbol]	PROPOSED INTERMEDIATE CONTOUR
[Symbol]	PROPOSED SURVEY ELEVATION
[Symbol]	PROPOSED CONDUIT LINE
[Symbol]	PROPOSED COMPOST FILTER SOCK (18")
[Symbol]	PROPOSED 18" COMPOST FILTER SOCK
[Symbol]	PROPOSED 24" COMPOST FILTER SOCK
[Symbol]	PROPOSED 30" COMPOST FILTER SOCK
[Symbol]	PROPOSED CANAL CONSTRUCTION FINISH
[Symbol]	PROPOSED ROCK CONSTRUCTION FINISH
[Symbol]	PROPOSED SHAFT PROTECTION
[Symbol]	PROPOSED CHANNEL
[Symbol]	PROPOSED STORMWATER CONDUIT
[Symbol]	PROPOSED PILE
[Symbol]	PROPOSED WELLS ANCHOR
[Symbol]	PROPOSED UNDERPASS
[Symbol]	PROPOSED DESIGN CONTROL ELEMENT
[Symbol]	DETAIL NUMBER
[Symbol]	DETAIL IDENTIFY

- STREAM AND WETLAND NOTES**
1. WETLAND AREAS ARE BEING RESTORED FOR THE FOLLOWING FOUR (4) WETLANDS THAT ARE LOCATED WITHIN 100 FT OF THE LIMIT OF DISTURBANCE WETLANDS 1A, 1B, 2, AND 4.
  2. THE STREAM SHOWN HEREIN OUTSIDE THE LIMIT OF DISTURBANCE ARE TYPICAL OF INTERMEDIATE AS SUCH, A BUFFER IS NOT BEING RESTORED FOR PERMANENT STREAM.
  3. DIMENSIONS SHOWN HEREIN ARE MEASURED FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

- COMPACTION SPECIFICATIONS**
1. PLACE 300 TON ROLL MATERIALS USING COMPACTION EQUIPMENT WITH GREATER THAN 16-TON WEIGHT IS COMPACTED LIFTS NOT EXCEEDING 12 INCHES THICK. USE A REDUCED LOOSE LIFT THICKNESS OF 4 INCHES (MAXIMUM) IN AREAS WHERE STEEL-PLATE TAMPERS OR OTHER HAND-OPERATED COMPACTORS ARE USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 4 INCHES IN INTERMEDIATE FILL AREAS WHERE HEAVY SELF-PROPULSED COMPACTORS ARE USED. A SELECTED MAXIMUM PARTICLE SIZE OF 3 INCHES SHOULD BE USED IN WEDGE MASSIVE SAND-PROVED COMPACTORS ARE USED. WASTE DEPOSITED PARTICLES EXCEEDING THE MAXIMUM PARTICLE SIZE SHOULD BE PLACED IN LIFTS NOT EXCEEDING 24 INCHES. LIFTS SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY COMPACTOR EQUIPMENT.
  2. GRADE: ALL PAD AND ROADWAY SUBSURFACES AND EACH LIFT OF FILL MATERIAL TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITHIN 25 PERCENT OF THE OPTIMUM MOISTURE CONTENT. DETERMINE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM METHOD D1557.
  3. ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED REINFORCED SOIL CLOSURE (RSC) AREAS. REFER TO DRAWING SUBSET THROUGH DESIGN FOR ADDITIONAL INFORMATION.

- REFERENCES**
1. DRAWINGS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
  2. UNDERGROUND UTILITIES LOCATED BY A GEOGRAPHICAL SURVEY CONDUCTED BY THE SURVEYORS LTD. DATED 05/23/2013 ON 05/25/2017.
  3. UTILITY FEATURES SHOWN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017 TO 05/12/2017.
  4. TOPOGRAPHY DERIVED FROM UNIMPROVED AERIAL PHOTOGRAPHS (UAP) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/18/2016.
  5. DIMENSION DIMENSIONS WERE PROVIDED BY CHEVRON.

**MISS UTILITY OF WEST VIRGINIA**  
 1-800-245-4848  
 West Virginia State Law  
 (Section 20-2-2) requires that you call the utility before you dig in the state of West Virginia.  
**IT'S THE LAW**



**APPROVED WVDEP OOG**  
 2/20/2018

SCALE IN FEET  
 0 10 20 30 40 50

**C&E**  
 Civil & Environmental Consultants, Inc.  
 1000 Through Lane, Suite 200 • Logan, OH 43040  
 740.242.0200 • cnc@ceci.com



**REVISION RECORD**

NO.	DATE	DESCRIPTION
1		
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**FREELAND WELL PAD**  
 CLAY DISTRICT  
 MARSHALL COUNTY, WEST VIRGINIA  
 PREPARED FOR:  
**CHEVRON APPALACHIA, LLC**  
 700 CHEROKEE PARKWAY  
 COFALPOOLIS, PA 15109

**EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)**  
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