

03/01/2019



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
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 M01H
47-051-02142-00-00

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 M01H
Farm Name: JOSEPH L. FREELAND ET UX
U.S. WELL NUMBER: 47-051-02142-00-00
Horizontal 6A New Drill
Date Issued: 3/1/2019

PERMIT CONDITIONS 4705102142 ^{03/01/2019}

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.

CONDITIONS

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

PERMIT CONDITIONS

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.



west virginia department of environmental protection

Office of Oil and Gas
601 57th 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 I, 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

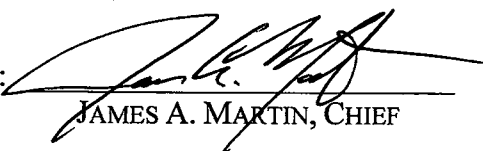
West Virginia Code §22-6A-12(b) requires, in part, that “[n]o well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetlands 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:

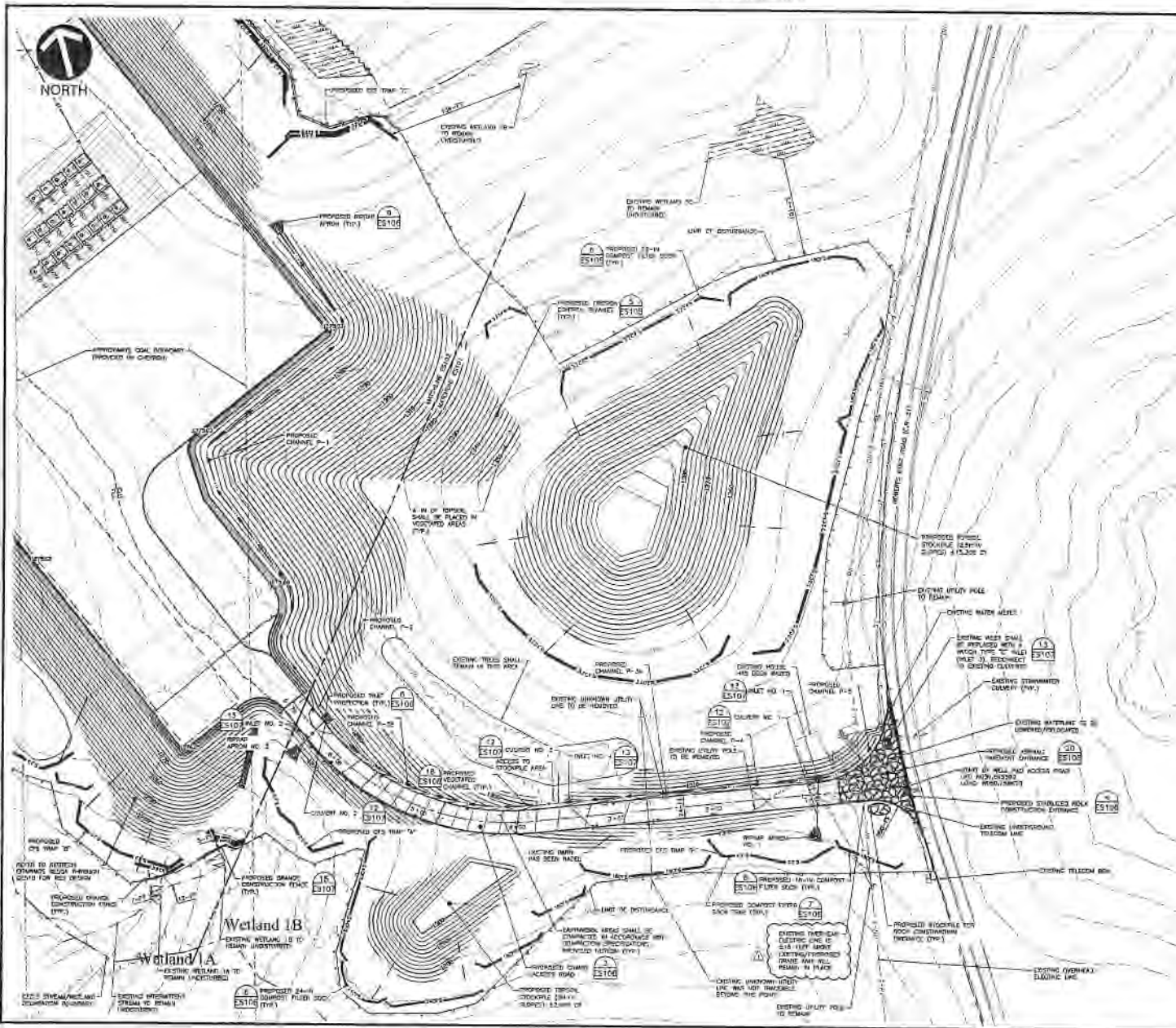
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment 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 HOOD CENTERLINE
- EXISTING INTERSECTION CENTERLINE
- EXISTING BRIDGE ROADWAY
- EXISTING DRAINAGE DRAINWAY
- EXISTING STRUCTURE/FOUNDATION
- EXISTING STREAM
- STREAM AND WETLAND DELINEATION BOUNDARY
- EXISTING WELLHEAD
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING WATERLINE
- EXISTING TELECOMMUNICATION LINE
- EXISTING STORMWATER CONDUIT
- EXISTING WATER MAIN
- EXISTING UTILITY POLE
- EXISTING PILEY
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED EDGE OF ACCESS ROADWAY
- PROPOSED DRIVEWAY
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONTINGENCY BEAN
- PROPOSED FILL/DO NOT FILL
- PROPOSED ACCESS DRIVEWAY
- PROPOSED INTERSECTION CENTERLINE
- PROPOSED BRIDGE ROADWAY
- PROPOSED CEMENT LINE
- PROPOSED COMBOST FILLER ROADWAY
- PROPOSED 18-IN COMPACT FILTER ROAD
- PROPOSED 24-IN COMPACT FILTER ROAD
- PROPOSED 32-IN COMPACT FILTER ROAD
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED ROCK EROSION CONTROL STRUCTURE
- PROPOSED ALLEY PROTECTION
- PROPOSED CHANNEL
- PROPOSED STORMWATER CONDUIT
- PROPOSED ALLEY
- PROPOSED BRIDGE
- PROPOSED UNDERPASS
- PROPOSED EROSION CONTROL STRUCTURE

ES104 = EXIST. HUBBLE
ES104 = EXIST. LOCATION

STREAM AND WETLAND NOTES

1. WETLANDS WERE BEING RECONSTRUCTED FOR THE FOLLOWING REASONS: (A) WETLANDS THAT ARE LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE; (B) WETLANDS 10, 15, 30, AND 60.
2. THE STREAMS SHOWN HEREON OUTSIDE THE LIMIT OF DISTURBANCE ARE SPONTANEOUS OR INTERMITTENT, AS SUCH A MAJOR IS NOT BEING RECONSTRUCTED FOR PERMANENT STREAMS.
3. CHANNELS SHOWN HEREON ARE MEASURED FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

COMPACTION SPECIFICATIONS

1. PLACE ONE FULL MATERIALS TESTING CORPORATION EQUIPMENT WITH GREATER THAN 110-TON WEIGHT IN COMPACTED LAYER, NOT EXCEEDING 18 INCHES THICK, USE A REDUCED LOADS PER INCHES OF 18 INCHES (MAXIMUM) IN AREAS WHERE STEEL-PLATE FRAMEWORK OR OTHER HAND-OPERATED EQUIPMENT ARE BEING USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 3 INCHES IN STRUCTURAL FILL AREAS. WHERE HEAVY, SELF-OPERATED EQUIPMENT ARE USED, MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 3 INCHES. MAXIMUM PARTICLE SIZE SHOULD BE PLACED IN LAYER NOT EXCEEDING 24 INCHES. LAYER SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY COMPACTION EQUIPMENT.
2. COMPACT ALL PAD AND ROADWAY SURFACES AND EACH LAYER OF FILL MATERIAL TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITHIN 5% PERCENT OF THE OPTIMUM MOISTURE CONTENT. EXTERNAL MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D1557 (STANDARD METHOD).
3. ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED RECONSTRUCTED SOIL SURFACE ROAD AREAS REFER TO DRAWING CD09 THROUGH CD10 FOR ADDITIONAL INFORMATION.

REFERENCES

1. SURFACE AND SETBACKS DELINEATED BY CHEVRON APPALACHIA, INC. DATED 04/24/2011.
2. INTERSECTION UTILITIES LOCATED BY A CROFTONVILLE SURVEY CONDUCTED BY PEG CONRAGHS LTD. DATED 02/12/2011 TO 02/26/2011.
3. UTILITY LOCATIONS SURVEYED BY CHEVRON APPALACHIA, INC. DATED 04/19/2011 TO 04/22/2011.
4. STORMWATER SURVEYED VIA UNMANNED AERIAL VEHICLE (UAV) BY CHEVRON APPALACHIA, INC. DATED 04/18/2011.
5. PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.

MISS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 West Virginia State Map
 (Search by County, Zip, or City) or
 Call Toll-Free West Virginia
 (or 800) to the State of West Virginia
IT'S THE LAW

FREE
 CHEVRON APPALACHIA, LLC
 4000 HERRING LANE, SUITE 200 • CHEVRON, VA 22822
 753-220-0000 • 800-245-4848



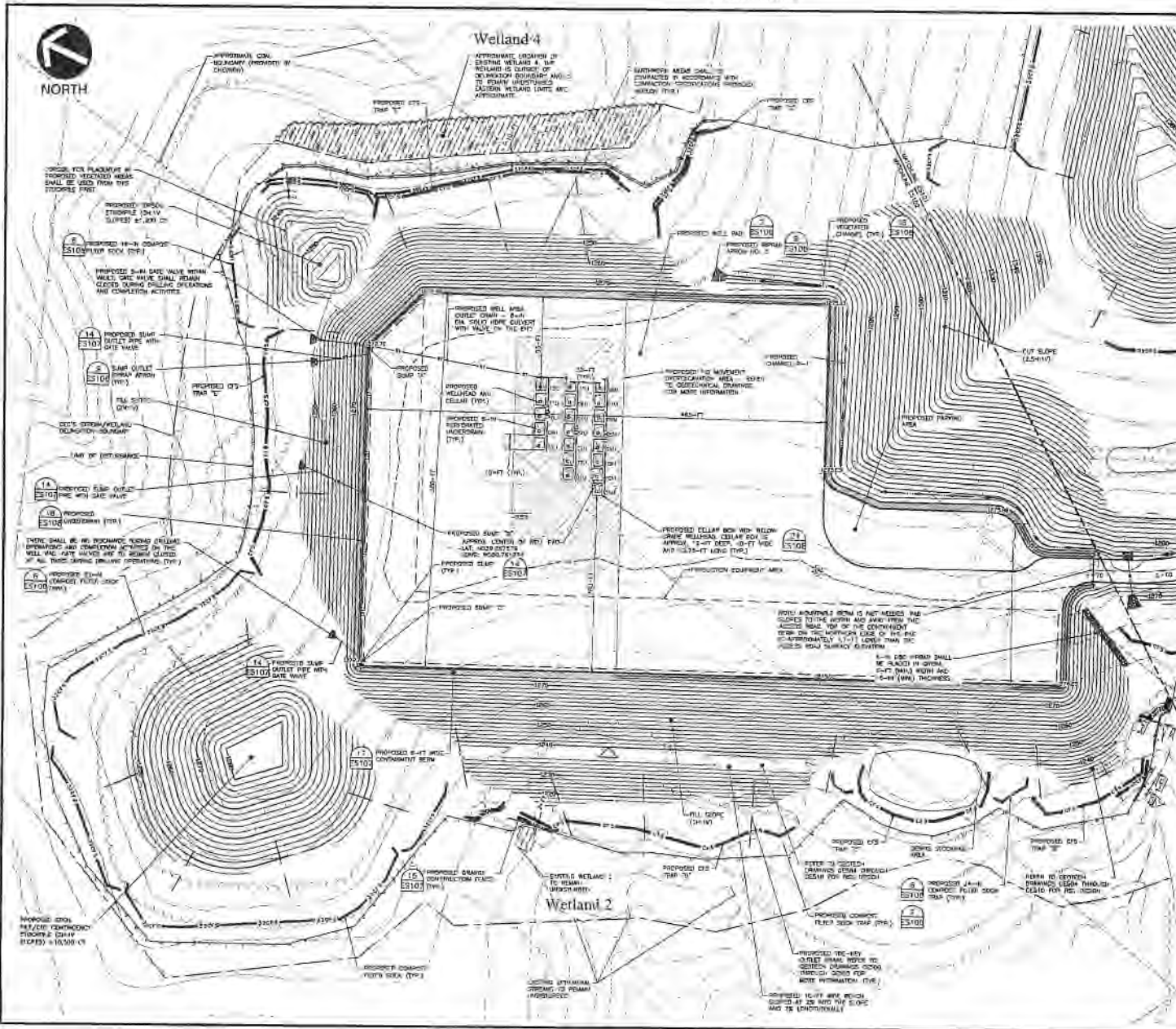
REVISION RECORD

NO.	DATE	BY	DESCRIPTION

FREE LAND WELL PAD
 CHEVRON APPALACHIA, LLC
 700 CHEVROTON PARKWAY
 CORAOPOLIS, PA 15106

EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)

Prepared by: **FREE**
 Drawn by: **ESD**
 Checked by: **JAM**
 Project Manager: **MSD**



LEGEND

[Symbol]	EXISTING PROPERTY LINE
[Symbol]	EXISTING MOORE CENTER
[Symbol]	EXISTING FENCE/POSTER CENTER
[Symbol]	EXISTING FENCE/POSTER
[Symbol]	EXISTING DRIVEWAY
[Symbol]	EXISTING STRUCTURE/PAVING
[Symbol]	EXISTING STREAM
[Symbol]	EXISTING AND WETLAND DELINEATION BOUNDARY
[Symbol]	EXISTING WETLAND
[Symbol]	EXISTING HYDRAULIC ELEVATION LINE
[Symbol]	EXISTING WATERLARK
[Symbol]	EXISTING FOLLOWSHIP/PROPERTY LINE
[Symbol]	EXISTING DRAINAGE DRAINAGE
[Symbol]	EXISTING FILL LIFT
[Symbol]	EXISTING WATER METER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING WELLS
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED EDGE OF ACCESS ROAD/PAD
[Symbol]	PROPOSED DRIVE
[Symbol]	PROPOSED ASPHALT DRIVEWAY
[Symbol]	PROPOSED CONCREMENT DRIVE
[Symbol]	PROPOSED PAVING AND REPAIR
[Symbol]	PROPOSED WELLS CENTER
[Symbol]	PROPOSED INTERMEDIATE CONTOUR
[Symbol]	PROPOSED 3% SLOPE
[Symbol]	PROPOSED CROWN LINE
[Symbol]	PROPOSED COMPACT FILLER SOIL TRAP
[Symbol]	PROPOSED 12-IN. COMPACT FILLER SOIL TRAP
[Symbol]	PROPOSED 4-IN. COMPACT FILLER SOIL TRAP
[Symbol]	PROPOSED 24-IN. COMPACT FILLER SOIL TRAP
[Symbol]	PROPOSED CHANGE DIRECTION FENCE
[Symbol]	PROPOSED ROCK DIRECTIONAL FENCE
[Symbol]	PROPOSED FENCE PROTECTION
[Symbol]	PROPOSED DRIVE
[Symbol]	PROPOSED STORMWATER CULVERT
[Symbol]	PROPOSED WALK
[Symbol]	PROPOSED WELLS AREA
[Symbol]	PROPOSED UNDERSEAM
[Symbol]	PROPOSED SPECIAL CONTROL SIGNAGE
[Symbol]	DETAIL NUMBER
[Symbol]	DETAIL LOCATION

- STREAM AND WETLAND NOTES**
1. WETLAND WATERS 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 4.
 2. THE STREAMS SHOWN HEREON OUTSIDE THE LIMIT OF DISTURBANCE ARE CHANGING OR INTERMITTENT AS SUCH, A WETLAND IS NOT BEING REQUESTED FOR WETLAND PROTECTION.
 3. DIMENSIONS SHOWN HEREON ARE MEASURED FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.
- COMPACTION SPECIFICATIONS**
1. PLACE SOIL FILL MATERIALS USING COMPACTION EQUIPMENT WITH CAPACITY THAN 10-TON WEIGHT OR COMPACTION RATE NOT EXCEEDING 12 INCHES DEEP. USE A REDUCED LAYER LIFT THICKNESS OF 4 INCHES (MAXIMUM) IN AREAS WHERE STEEL-FLAKE TAMPERS OR OTHER HAND-OPERATED EQUIPMENT ARE BEING USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 6 INCHES IN STRUCTURE. IN AREAS WHERE HEAVY, SELF-PROPULSED COMPACTORS ARE USED, A REDUCED MAXIMUM PARTICLE SIZE OF 3 INCHES SHOULD BE USED IN AREAS WHERE HAND-OPERATED COMPACTORS ARE USED. NOTE: OVERSIZED PARTICLES (EXCEEDING THE MAXIMUM PARTICLE SIZE) LOCATED ABOVE OUTSIDE OF THE PROPOSED FILL AREAS OF 10 DEEPEST AREAS OF FILL OVERSTOCK SOIL PARTICLES (I.E., MATERIALS SHOWN IN AREAS PLACED IN THE DEEPEST LAYER OF FILL SHOULD BE PLACED IN LIFT NOT EXCEEDING 24 INCHES. LIFT SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY COMPACTION EQUIPMENT.
 2. COMPACT ALL SOIL AND REMOVED SUBSTRATES AND EACH LIFT OF FILL MATERIAL TO A MINIMUM OF 90 PERCENT OF ITS MAXIMUM DRY WEIGHT WATER AS PERCENT OF THE OPTIMUM MOISTURE CONTENT DETERMINED THROUGH LAB TESTING AND OPTIMUM MOISTURE CONTENT IS ACCORDANCE WITH ASTM D698 (STANDARD METHOD).
 3. ADDITIONAL PROTECTIVE ARE REQUIRED FOR THE PROPOSED REMOVED SOIL SOIL (SOIL WASH WATER) IN DRAINAGE BASIN THROUGHOUT THE ENTIRE PROJECT PERIOD.
- REFERENCES**
1. STREAMS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
 2. UNDERGROUND UTILITIES LOCATED BY A GEOTECHNICAL SURVEY CONDUCTED BY THE GEOTECHNICAL INC. DATED 05/13/2017 TO 05/15/2017.
 3. SURVEY FEATURES SUPPLIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/06/2017 TO 04/12/2017.
 4. TOPOGRAPHY SURVEYED BY UNIMATED AERIAL VEGETABLE (UAV) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/18/2016.
 5. PROPERTY BOUNDARIES WERE PROVIDED BY CHEVRON.

MISS UTILITY OF WEST VIRGINIA
1-800-245-4844

Call before you dig. It's the law. Digging without calling may result in fines and penalties. Call before you dig. It's the law.

IT'S THE LAW

SCALE 1" = 40'

FREE LAND WELL PAD
CLAY DISTRICT
MARSHALL COUNTY, WEST VIRGINIA
PREPARED FOR
CHEVRON APPALACHIA, LLC
700 CHERINGTON PARKWAY
CORRADOVILLE, PA 15103

EROSION AND SEDIMENT CONTROL PLAN (2 OF 3)

Project # 172 043
Drawing Scale: 1"=40'
Date Issued: 11/19/2018
Under # 17200
Drawn by: ESB
Checked by: JMM
Prepared by: JMM

ES 102

This drawing is the property of CHEVRON APPALACHIA, LLC. It is to be used only for the project and location specified hereon. It is not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of CHEVRON APPALACHIA, LLC.

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, VA
Operator ID County District Quadrangle

2) Operator's Well Number: M01H 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 Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No No

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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: 15,234

11) Proposed Horizontal Leg Length: 8,457

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

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

RECEIVED
Office of Oil and Gas

(a) If Yes, provide Mine Info: Name: _____

Depth: _____

Seam: _____

Owner: _____

DEC 17 2018
WV Department of
Environmental Protection

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
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	15,234	15,234	2,670' (500' below 9.625" shoe)
Tubing							
Liners							

ju
12/11/18

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
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 DEC 17 2018
Sizes:					WV Department of Environmental Protection
Depths Set:					

je
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% CaCl₂, and flake. The intermediate will contain class A cement, 3% CaCl₂, 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.

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.

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*Note: Attach additional sheets as needed.

Cement Additives

The Water String the blend will contain class A cement, 3% CaCl₂, and flake.

The intermediate will contain class A cement, 10% CaCl₂, 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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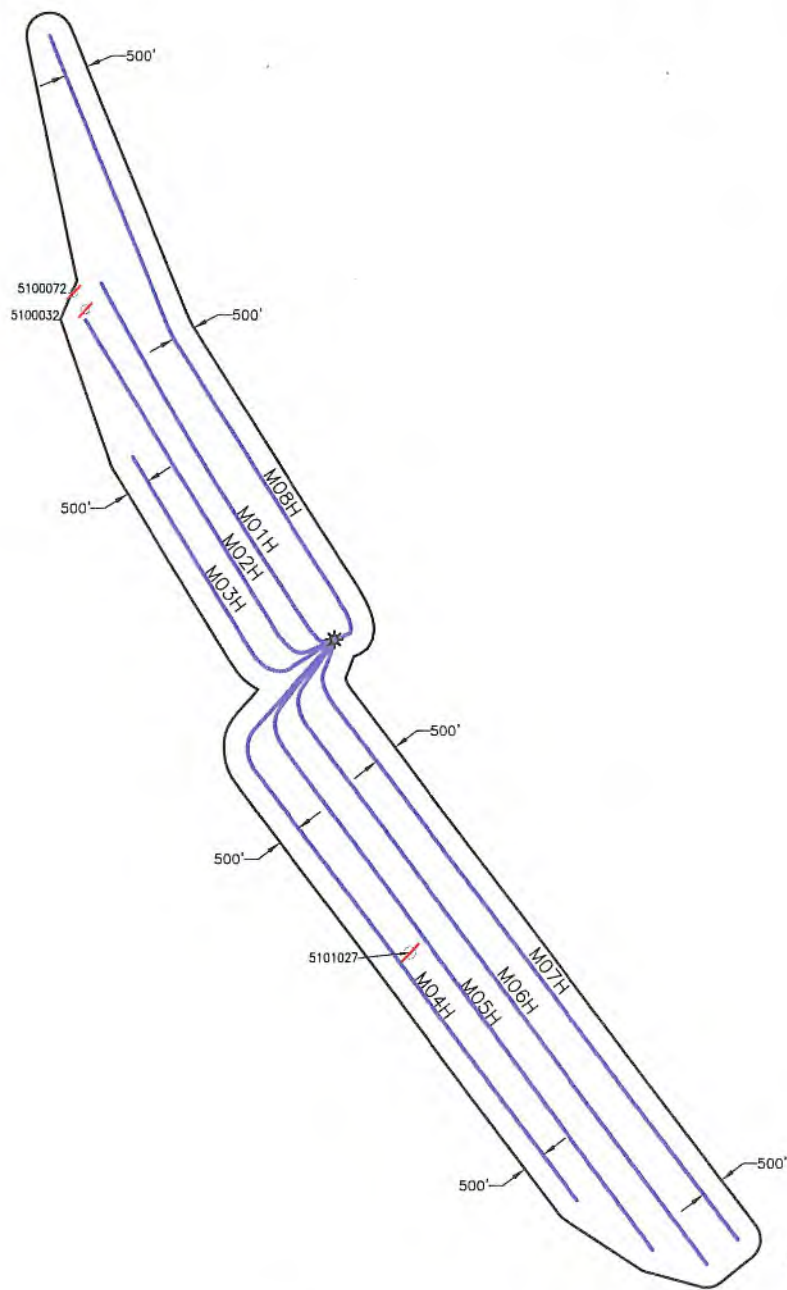
Freeland M01H

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					
Clay Twp, Marshall Co, WV											
										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 (ts 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) 10.625 ID (in) 8.835 Drift ID (in) 8.679 Burst (psi) 5,750 Collapse (psi) 3,090 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 casg to ROP		5-1/2" Casing		15,234				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) 14,360 Collapse (psi) 12,090 Yield (Jt Strength 1,000 lbs) 729	Production Lead Slurry Cement to 500' below 9-5/8" shoe
	Float Equip. Float Equip.		5-1/2" Casing		15,234				8.75 - 8.5		

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10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

PREPARED FOR:

CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY
CORAPOLIS, PA 15108

FREELAND
AREA OF REVIEW MAP
MARSHALL COUNTY
CLAY DISTRICT
WEST VIRGINIA

LEGEND

- WELL LOCATION
- PLUGGED WELL
- ABANDON WELL

TOPO QUAD: POWHATAN POINT, WV

SCALE: 1" = 4000'

DATE: SEPTEMBER 7, 2018

4705102142

03/019

Well ID	Pilot/Operator/On Record	Operator - DEP	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones/NOT Perforated
47051-00072	Wasmoth-Callahan Gas Co.	Operator Unknown	ABANDONED	39.887867	-80.781834	N/A	N/A	None
47051-00032	R L McDowdell	Operator Unknown	ABANDONED	39.886851	-80.780892	N/A	N/A	None
47051-01027	CNX Gas Company	CNX Gas Company LLC	ABANDONED	39.849249	-80.75489	N/A	N/A	None

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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

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

My commission expires September 17, 2022

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Office of Oil and Gas
September 17, 2018
WV Department of
Environmental Protection

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
Annual Ryegrass - 50	
Winter Wheat - 75	
Cereal Ryegrass - 50	

Seed Type	lbs/acre
See Attached	

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: Jessie Theobald

Comments: _____

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Title: Oil & Gas Inspector Date: 12/5/18

Field Reviewed? Yes No

4705102142

Seed Mixtures

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

Permanent

Seed Type	lbs/acre
Hayfield, Pastureland, and Cropland	6000
Orchard Grass	2400.00
Timothy	960.00
Birdsfoot - Trefoil	96.00
Ladino Clover	9.60

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Chevron

Appalachian LLC
WV Well Site Safety Plan
Pad: Freeland Pad A
Well # M01H

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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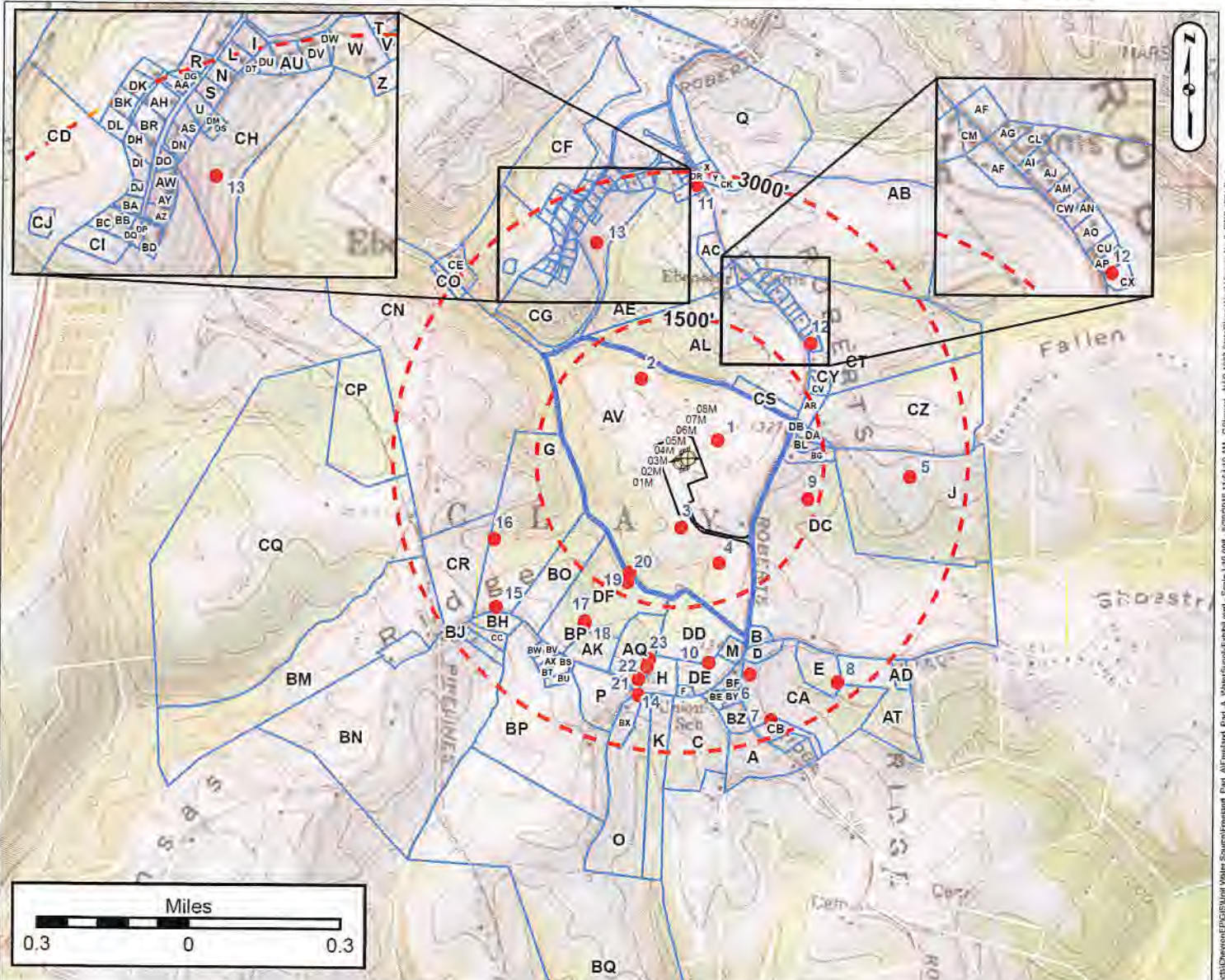


WATER SUPPLY EXHIBIT FREELAND PAD A

03/01/2019



4705102142



LOT OWNERS

Parcel ID	Owner	Parcel ID	Owner	Parcel ID	Owner	Parcel ID	Owner
25-04 1202300001	BOYD, GREG ELYWOOD	25-04 7803400001	DAVIS, GREG T	25-04 7803400002	DAVIS, GREG T	25-04 7803400003	DAVIS, GREG T
25-04 7803200001	HUNT, WILLIAM ROBERT	25-04 7803200002	YOUNG, MICHAEL WILLIAM	25-04 7803200003	YOUNG, MICHAEL WILLIAM	25-04 7803200004	YOUNG, MICHAEL WILLIAM
25-04 1300020001	KESER, PHILIP ET UX	25-04 7803300001	HONNINGSBUONDI, R ET UX	25-04 7803300002	HONNINGSBUONDI, R ET UX	25-04 7803300003	HONNINGSBUONDI, R ET UX
25-04 1300130001	LEIGHT, JAMES ET UX	25-04 7803600001	CHAMBERS, RICHARD MICHELLE	25-04 7803600002	CHAMBERS, RICHARD MICHELLE	25-04 7803600003	CHAMBERS, RICHARD MICHELLE
25-04 1300230001	CHANDLER, RUTH E	25-04 7803700001	PERAZICH, SCHEMMA ET UX	25-04 7803700002	PERAZICH, SCHEMMA ET UX	25-04 7803700003	PERAZICH, SCHEMMA ET UX
25-04 2903300001	MASON, SHARLENE	25-04 7803800001	BERNARD, RICHARD ROBERT ET UX	25-04 7803800002	BERNARD, RICHARD ROBERT ET UX	25-04 7803800003	BERNARD, RICHARD ROBERT ET UX
25-04 3002000001	TERKOW, NORMAN J & BEATRICE	25-04 7803900001	MASON, JOHN & NANCY LUY	25-04 7803900002	MASON, JOHN & NANCY LUY	25-04 7803900003	MASON, JOHN & NANCY LUY
25-04 7803100001	SCHEMMA, MARK A ET UX	25-04 1300300001	SCHEMMA, LIONEL ET UX	25-04 1300300002	SCHEMMA, LIONEL ET UX	25-04 1300300003	SCHEMMA, LIONEL ET UX
25-04 7803200001	KRAM, WILLIAM H ET UX	25-04 7803400001	MASON, JOHN & NANCY LUY	25-04 7803400002	MASON, JOHN & NANCY LUY	25-04 7803400003	MASON, JOHN & NANCY LUY
25-04 7803300001	HIGGINS, JENNIFER M ET UX	25-04 7803400001	BERNARD, RICHARD ROBERT ET UX	25-04 7803400002	BERNARD, RICHARD ROBERT ET UX	25-04 7803400003	BERNARD, RICHARD ROBERT ET UX
25-04 3300040001	RAMSEY, ROBERT ET UX	25-04 7803500001	WILSON, SCOTT W ET UX	25-04 7803500002	WILSON, SCOTT W ET UX	25-04 7803500003	WILSON, SCOTT W ET UX
25-04 7803600001	MILLER, PAUL A & TAMMY SUE	25-04 7803700001	SMITHSON, PATRICIA A - LIFE	25-04 7803700002	SMITHSON, PATRICIA A - LIFE	25-04 7803700003	SMITHSON, PATRICIA A - LIFE
25-04 7803700001	BARTLETT, BRUCE E	25-04 7803800001	SMITHSON, PATRICIA A - LIFE	25-04 7803800002	SMITHSON, PATRICIA A - LIFE	25-04 7803800003	SMITHSON, PATRICIA A - LIFE
25-04 7803800001	SMITHSON, PATRICIA A - LIFE	25-04 7803900001	SMITHSON, PATRICIA A - LIFE	25-04 7803900002	SMITHSON, PATRICIA A - LIFE	25-04 7803900003	SMITHSON, PATRICIA A - LIFE
25-04 1300240001	DANAHAY, SHAWN T & ZILLY J	25-04 7804000001	SMITHSON, PATRICIA A - LIFE	25-04 7804000002	SMITHSON, PATRICIA A - LIFE	25-04 7804000003	SMITHSON, PATRICIA A - LIFE
25-04 7804100001	DEER, CHARLES W ET UX	25-04 7804200001	SMITHSON, PATRICIA A - LIFE	25-04 7804200002	SMITHSON, PATRICIA A - LIFE	25-04 7804200003	SMITHSON, PATRICIA A - LIFE
25-04 7804300001	HANLEY, CHARLES ROBERT ET UX	25-04 7804400001	SMITHSON, PATRICIA A - LIFE	25-04 7804400002	SMITHSON, PATRICIA A - LIFE	25-04 7804400003	SMITHSON, PATRICIA A - LIFE
25-04 7804500001	WYTHE, JOSEPH H ET UX	25-04 7804600001	SMITHSON, PATRICIA A - LIFE	25-04 7804600002	SMITHSON, PATRICIA A - LIFE	25-04 7804600003	SMITHSON, PATRICIA A - LIFE
25-04 7804700001	SMITHSON, PATRICIA A - LIFE	25-04 7804800001	SMITHSON, PATRICIA A - LIFE	25-04 7804800002	SMITHSON, PATRICIA A - LIFE	25-04 7804800003	SMITHSON, PATRICIA A - LIFE
25-04 7804900001	SMITHSON, PATRICIA A - LIFE	25-04 7805000001	SMITHSON, PATRICIA A - LIFE	25-04 7805000002	SMITHSON, PATRICIA A - LIFE	25-04 7805000003	SMITHSON, PATRICIA A - LIFE
25-04 7805100001	SMITHSON, PATRICIA A - LIFE	25-04 7805200001	SMITHSON, PATRICIA A - LIFE	25-04 7805200002	SMITHSON, PATRICIA A - LIFE	25-04 7805200003	SMITHSON, PATRICIA A - LIFE
25-04 7805300001	SMITHSON, PATRICIA A - LIFE	25-04 7805400001	SMITHSON, PATRICIA A - LIFE	25-04 7805400002	SMITHSON, PATRICIA A - LIFE	25-04 7805400003	SMITHSON, PATRICIA A - LIFE
25-04 7805500001	SMITHSON, PATRICIA A - LIFE	25-04 7805600001	SMITHSON, PATRICIA A - LIFE	25-04 7805600002	SMITHSON, PATRICIA A - LIFE	25-04 7805600003	SMITHSON, PATRICIA A - LIFE
25-04 7805700001	SMITHSON, PATRICIA A - LIFE	25-04 7805800001	SMITHSON, PATRICIA A - LIFE	25-04 7805800002	SMITHSON, PATRICIA A - LIFE	25-04 7805800003	SMITHSON, PATRICIA A - LIFE
25-04 7805900001	SMITHSON, PATRICIA A - LIFE	25-04 7806000001	SMITHSON, PATRICIA A - LIFE	25-04 7806000002	SMITHSON, PATRICIA A - LIFE	25-04 7806000003	SMITHSON, PATRICIA A - LIFE
25-04 7806100001	SMITHSON, PATRICIA A - LIFE	25-04 7806200001	SMITHSON, PATRICIA A - LIFE	25-04 7806200002	SMITHSON, PATRICIA A - LIFE	25-04 7806200003	SMITHSON, PATRICIA A - LIFE
25-04 7806300001	SMITHSON, PATRICIA A - LIFE	25-04 7806400001	SMITHSON, PATRICIA A - LIFE	25-04 7806400002	SMITHSON, PATRICIA A - LIFE	25-04 7806400003	SMITHSON, PATRICIA A - LIFE
25-04 7806500001	SMITHSON, PATRICIA A - LIFE	25-04 7806600001	SMITHSON, PATRICIA A - LIFE	25-04 7806600002	SMITHSON, PATRICIA A - LIFE	25-04 7806600003	SMITHSON, PATRICIA A - LIFE
25-04 7806700001	SMITHSON, PATRICIA A - LIFE	25-04 7806800001	SMITHSON, PATRICIA A - LIFE	25-04 7806800002	SMITHSON, PATRICIA A - LIFE	25-04 7806800003	SMITHSON, PATRICIA A - LIFE
25-04 7806900001	SMITHSON, PATRICIA A - LIFE	25-04 7807000001	SMITHSON, PATRICIA A - LIFE	25-04 7807000002	SMITHSON, PATRICIA A - LIFE	25-04 7807000003	SMITHSON, PATRICIA A - LIFE

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

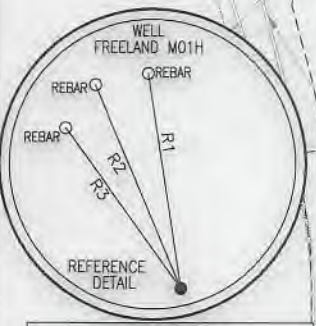
County: MARSHALL Office of Oil and Gas
 Township: MOUNDSVILLE, WV
 GROUNDWATER & ENVIRONMENTAL
 Surveyor: SERVICES, INC.
 Address: 301 COMMERCE PARK DR
CRANBERRY TOWNSHIP, PA 18066
 Phone: 800-267-2549

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.

I:\Projects\Freeland\Freeland Water Supply\Freeland Pad A\Freeland_Pad_A_WaterSupplyExhibit.mxd - Scale 1:16,000 - 03/01/2019 11:54:19 AM - C:\Users\j... - 1803 SuperPlane West Virginia Route 4701 West

BHL is located on topo map 10,296 feet south of Latitude: 39° 55' 00"
 SHL is located on topo map 2,734 feet south of Latitude: 39° 52' 30"

BHL is located on topo map 8,340 feet west of Longitude: 80° 45' 00"
 SHL is located on topo map 3,331 feet west of Longitude: 80° 45' 00"



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
- LOCATE & AVOID
- GAS WELLS**
- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

LINE	BEARING	DISTANCE
R1	N 09°37'49" W	224.04'
R2	N 23°58'48" W	228.76'
R3	N 37°12'52" W	205.47'
R4	N 38°22'11" W	1636.63'
R5	S 22°39'39" E	1809.37'
R6	N 71°32'04" E	1233.51'

- 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 herein. 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.

SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4413085.83
 E:520415.49
 NAD83, WV NORTH
 N:500597.517
 E:1614480.807

APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4413221.74
 E:520218.74
 NAD83, WV NORTH
 N:501054.279
 E:1613842.641

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4415394.38
 E:518833.53
 NAD83, WV NORTH
 N:508259.799
 E:1609416.207

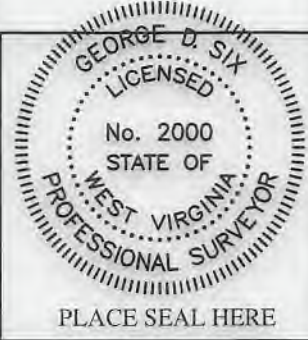
Blue Mountain
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: FREELAND M01H
 DRAWING #: FREELAND M01H
 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

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: POWHATAN POINT, WV 7.5'

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

OIL & GAS ROYALTY OWNER: JOSEPH FREELAND ET UX ACREAGE: 574.824±

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: 15,234.08'±

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

DATE: OCTOBER 12, 2018

OPERATOR'S WELL #: FREELAND M01H

API WELL #: 47 51 02142
 STATE COUNTY PERMIT

FREELAND M01H PAGE 2 OF 2

03/01/2019

	SURFACE OWNER	DIST-TM/PAR
1	JOSEPH L. FREELAND ET UX	4-7/21
2	MICHAEL WILLIAM YOUNG	4-7/5.5
3	LINDA J. KING	4-7/5.4
4	JOHN O. RINE	4-7/5.6
5	*MARSHALL COUNTY SEWERAGE DIST	4-7/5.7
6	LINDA J. KING	4-7/5
7	LARRY M. & ROSEANNA J. KELLER	4-5/75
8	LANE P. & TONI L. RINE	4-5/73
9	FLOYD W. BOLEN ET UX ESTS	4-6/12
10	ROBERT W. ASTON	4-6/13

	LESSOR	DIST-TM/PAR
A	JOSEPH FREELAND ET UX	4-7/21
B	MICHAEL W. YOUNG	4-7/5.5
C	ROGER R. KING ET UX	4-7/5.4
D	JOHN O. RINE ET UX	4-7/5.6
E	*MARSHALL COUNTY SEWERAGE DISTRICT	4-7/5.7
F	ROGER R. KING ET UX	4-7/5
G	ROSEANNA KELLER ET VIR	4-5/75
H	LANE P. RINE ET UX	4-5/73
J	EMMA A. SNEDEKER	4-6/12
	NOREEN S. HEDRICK	
	EVELYN K. SNEDEKER	
	ROBERT D. SIGLER ET UX	
	NANCY C. RIGGS	
	DONALD A. SNEDEKER	
	DELORES J. CALLIHAN	
	TRACI L. WILLIAMS	
	ROBERT J. SCHAUER ET UX	
	KATHERINE MATHEWS	
	FLOYD EUGENE BOLEN JR.	
	ROBERT M. MERASHOFF	
	EQT PRODUCTION CO ET AL	
K	EMMA A. SNEDEKER	4-6/13
	NOREEN S. HEDRICK	
	CHESTNUT HOLDINGS LLC	
	EVELYN K. SNEDEKER	
	ROBERT D. SIGLER ET UX	
	NANCY C. RIGGS	
	DONALD A. SNEDEKER	
	DELORES J. CALLIHAN	
	TRACI L. WILLIAMS	
	ROBERT J. SCHAUER ET UX	
	ROBERT M. MERASHOFF	
	EQT PRODUCTION CO ET AL	

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
 N:4413085.83
 E:520415.49
 NAD83, WV NORTH
 N:500597.517
 E:1614480.807

APPROX. LANDING POINT
UTM 17-NAD83(M)
 N:4413221.74
 E:520218.74
 NAD83, WV NORTH
 N:501054.279
 E:1613842.641

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
 N:4415394.38
 E:518833.53
 NAD83, WV NORTH
 N:508259.799
 E:1609416.207

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

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:

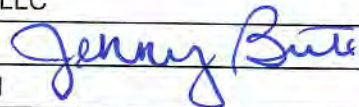
- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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Environmental Protection

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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Freeland Unit #1H - 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	4-7-5.5	YOUNG MICHAEL W	TriEnergy Holdings, LLC	0.160	711/357	24/430 TriEnergy Holdings, LLC to NPAR, LLC	756/332 NPAR, LLC to Chevron U.S.A. Inc.	n/a
C	4-7-5.4	KING ROGER R ET UX	Chesapeake Appalachia, LLC	0.125	700/415	23/127 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.
D	4-7-5.6	RINE JOHN O ET UX	TriEnergy Holdings, LLC	0.170	738/484	26/123 TriEnergy Holdings, LLC to NPAR, LLC	26/201 NPAR, LLC to Chevron U.S.A. Inc.	n/a
E	4-7-5.7	MARSHALL COUNTY SEWERAGE DISTRICT	Chevron U.S.A. Inc.	0.140	814/1	n/a	n/a	n/a
F	4-7-5	KING ROGER R ET UX	Chesapeake Appalachia, LLC	0.125	700/415	23/127 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.
G	4-5-75	KELLER ROSEANNA ET VIR	Chesapeake Appalachia, LLC	0.180	714/190	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.
H	4-5-73	RINE LANE P ET UX	Chevron U.S.A. Inc.	0.140	796/226	n/a	n/a	n/a
J	4-6-12	SNEDEKER EMMA A - SFX	Chevron U.S.A. Inc.	0.150	803/580	n/a	n/a	n/a
		HEDRICK NOREEN S - SFX	Chevron U.S.A. Inc.	0.150	807/155	n/a	n/a	n/a
		SNEDEKER EVELYN K - SFX	Chevron U.S.A. Inc.	0.150	803/63	n/a	n/a	n/a
		SIGLER ROBERT D ET UX - SFX	Chevron U.S.A. Inc.	0.150	801/501	n/a	n/a	n/a
		RIGGS NANCY C - SFX	Chevron U.S.A. Inc.	0.150	801/511	n/a	n/a	n/a
		SNEDEKER DONALD A - SFX	Chevron U.S.A. Inc.	0.150	801/521	n/a	n/a	n/a
		CALLIHAN DELORES J - SFX	Chevron U.S.A. Inc.	0.150	803/53	n/a	n/a	n/a
		WILLIAMS TRACI L - SFX	Chevron U.S.A. Inc.	0.150	813/610	n/a	n/a	n/a
		SCHAUER ROBERT J ET UX - SFX	Chevron U.S.A. Inc.	0.150	813/620	n/a	n/a	n/a
		MATHEWS KATHERINE - SFX	Chevron U.S.A. Inc.	0.150	917/45	n/a	n/a	n/a

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 DEPT 7
 WV Department of Environmental Protection

Freeland Unit #1H - BATCH 1 - MRCL FULL

Plat ID	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
K		BOLEN FLOYD EUGENE JR - SFX	Chevron U.S.A. Inc.	0.150	917/48	n/a	n/a	n/a
		MERASHOFF ROBERT M - SFX	Chevron U.S.A. Inc.	0.160	817/479	n/a	n/a	n/a
		EQT PRODUCTION CO ET AL	Chevron U.S.A. Inc.	0.180	955/521	n/a	n/a	n/a
	4-6-13	SNEDEKER EMMA A - SFX	Chevron U.S.A. Inc.	0.150	803/580	n/a	n/a	n/a
		HEDRICK NOREEN S - SFX	Chevron U.S.A. Inc.	0.150	807/155	n/a	n/a	n/a
		CHESTNUT HOLDINGS LLC	Republic Energy Ventures, LLC	0.160	839/176	32/415 Republic Energy Ventures, LLC to Chevron U.S.A. Inc.	n/a	n/a
		SNEDEKER EVELYN K - SFX	Chevron U.S.A. Inc.	0.150	803/63	n/a	n/a	n/a
		SIGLER ROBERT D ET UX - SFX	Chevron U.S.A. Inc.	0.150	801/501	n/a	n/a	n/a
		RIGGS NANCY C - SFX	Chevron U.S.A. Inc.	0.150	801/511	n/a	n/a	n/a
		SNEDEKER DONALD A - SFX	Chevron U.S.A. Inc.	0.150	801/521	n/a	n/a	n/a
		CALLIHAN DELORES J - SFX	Chevron U.S.A. Inc.	0.150	803/53	n/a	n/a	n/a
		WILLIAMS TRACI L - SFX	Chevron U.S.A. Inc.	0.150	813/610	n/a	n/a	n/a
		SCHAUER ROBERT J ET UX - SFX	Chevron U.S.A. Inc.	0.150	813/620	n/a	n/a	n/a
		MERASHOFF ROBERT M - SFX	Chevron U.S.A. Inc.	0.160	817/479	n/a	n/a	n/a
		EQT PRODUCTION CO ET AL	Chevron U.S.A. Inc.	0.180	955/521	n/a	n/a	n/a

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Kevin J Cruz
Land Representative, AMBU

September 10, 2018

West Virginia D.E.P.
Office of Oil & Gas
601 57th 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

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Office of Oil and Gas
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Department of

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

Date of Notice Certification: 12/14/18

API No. 47- _____
Operator's Well No. M01H
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>520415.49</u>
County:	<u>Marshall</u>		Northing:	<u>4413085.83</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

- 1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
- 2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
- 3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
- 4. NOTICE OF PLANNED OPERATION
- 5. PUBLIC NOTICE
- 6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY	
<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.

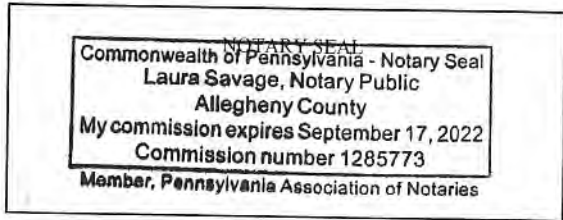
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Office of Oil and Gas
West Virginia Department of Environmental Protection

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:	<u>Chevron Appalachia, LLC</u>	Address:	<u>700 Cherrington Parkway</u>
By:	<u>Jenny Butchko</u>		<u>Coraopolis, PA 15108</u>
Its:	<u>Permitting Team Lead</u>	Facsimile:	<u>412-865-2403</u>
Telephone:	<u>412-865-1533</u>	Email:	<u>JZYK@chevron.com</u>



Commonwealth of Pennsylvania
County of Allegheny
Subscribed and sworn before me this 24th 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.

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

COAL OPERATOR
Name: Murray Energy Corp.
Address: 46226 National Road
St. Clairsville, OH 43960

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See Attachment
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____ **RECEIVED**
Address: _____ **Office of Oil and Gas**

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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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.**

WV Department of
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4705102142

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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API NO. 47- _____ - _____ **03/01/2019**
OPERATOR WELL NO. MONTH
Well Pad Name: Freeland

Notice is hereby given by:

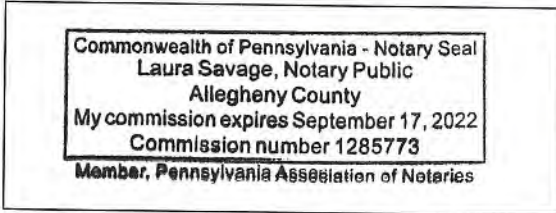
Well Operator: Chevron Appalachia, LLC
Telephone: 412-865-1533
Email: JZYK@chevron.com

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

Jenny BurchKO

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.



*Commonwealth of Pennsylvania
County of Allegheny*

Subscribed and sworn before me this 24th day of September, 2018.

Laura Savage

Notary Public

My Commission Expires September 17, 2022

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4705102142

Attachment to WW-6A

API No. 47-____ - _____

OPERATOR WELL NO. M01H

Well Pad Name: Freeland

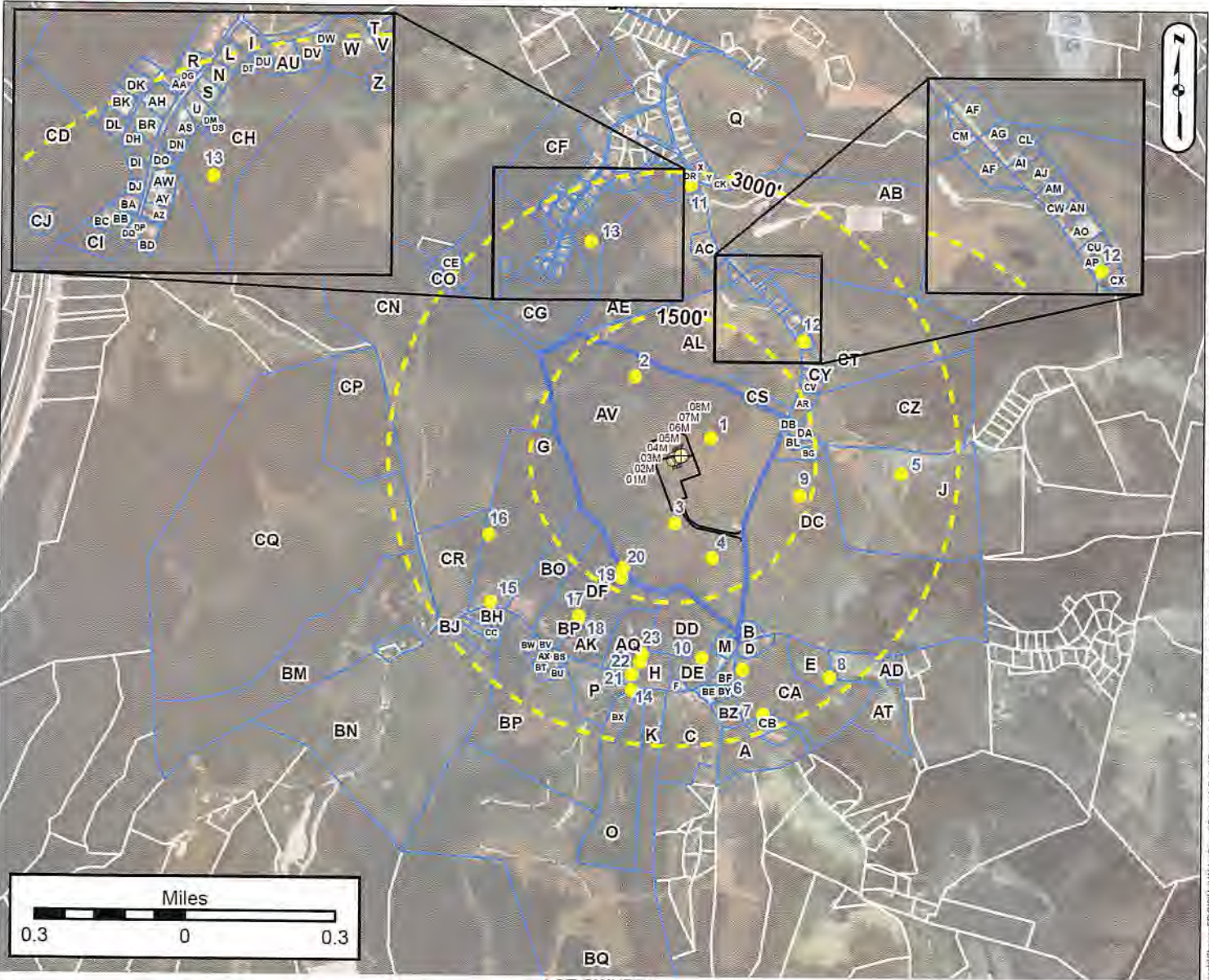
- SURFACE OWNER**
Name:
Address:
- COAL OWNER OR LESSEE**
Name:
Address:
- COAL OPERATOR**
Name:
Address:
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**
Name: Joseph L. Freeland ET UX
Address: 813 Clearview Terrace
New Martinsville, WV 26155
- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR**
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. Derrow, 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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Environmental Protection



WATER SUPPLY EXHIBIT FREELAND PAD A

47051021 03/01/2019



LOT OWNERS

Lot	OWNER	PARCEL ID	Label	OWNER	PARCEL ID	Label	OWNER	PARCEL ID	Label	OWNER	PARCEL ID	Label	OWNER	PARCEL ID	Label
A	BASSETT GREG ELWOOD	25-04 139410000	IV	BAWING DAVID W & LOU	25-04 780045000	AE	BAWING DAVID F	25-04 780045000	AM	BECKENHART MARSHALL M	25-04 780080000	CH	BOLNE MICHAEL WILLIAM	25-04 780050000	DC
B	HEAT WILLIAM ROBERT	25-04 780070000	V	HENDERSON ELAINE D	25-04 780030000	AC	KOHLING MICHAEL WILLIAM	25-04 780010000	AN	BOWEN VANCE B & CAROL ANN	25-04 140010000	CI	BONE JOHN D ET UX	25-04 780020000	DE
C	JONES PHILIP ET UX	25-04 139007000	V	REIDOR JACK E ET UX	25-04 780030000	AT	SCHWAB LUDWIG E ET UX	25-04 140010000	BO	BERGOW NORMAN ET UX	25-04 780020000	CL	MARSHALL COUNTY SHERBORN DIST	25-04 780040000	DF
D	GILBERT JAMES EY	25-04 138810000	IV	FRITZ JOHN W III & JANE	25-04 780060000	AU	CHAMPA BUFFINGTON ANNE MARIE	25-04 780020000	BP	ESTEP EUGENE C & ELIZABETH A	25-04 140010000	CM	KUMBLER KIMMY REBE	25-04 780010000	DI
E	CHARNOCK JUSTINE B	25-04 139007000	IIA	JARVIN LARRY MICHAEL & MARIE S	25-04 780030000	AV	DELANEY ROBERT W ET UX	25-04 780040000	BQ	BECK W HIRSH ET UX	25-04 780020000	CO	BRENZEN M F CHURCH BV	25-04 780010000	DK
F	MARION SHIRLEY A	25-04 780010000	AB	BERGOW GARY KEVIN ET UX	25-04 780070000	AW	SCHWABSTEIN ROBERT ET UX	25-04 139001000	BR	ELMSTERS WILLIAM J	25-04 140010000	CN	PITRELLI CATHY A CARL R	25-04 780010000	DL
G	GERBOW JERAMIAH & BIRIANA	25-04 780020000	IC	MELSON JOHN P & HEATY LUCY	25-04 780070000	AX	ELMSTERS WILLIAM J	25-04 139001000	BS	ELMSTERS WILLIAM J	25-04 140010000	CP	CONNOCKION COAL COMPANY	25-04 780010000	DM
H	HINDENSON NINA F ET UX	25-04 780010000	AE	SCHWAB LUDWIG ET UX	25-04 139010000	AY	FRIDON DONALD P ET UX	25-04 780040000	BT	ELMSTERS WILLIAM J	25-04 140010000	CQ	MARCHESS PAUL J & ESTEY D	25-04 780030000	DN
I	RYAN WILLIAM ET UX	25-04 780010000	AE	MARION GARY W & MARY LUCY	25-04 780070000	AZ	HOLLMAN JOHN EUGENE ET UX	25-04 780010000	BU	ELMSTERS WILLIAM J	25-04 140010000	CR	ROBERTS CHARLES D & GARY	25-04 780010000	DO
J	HIGGINSDHAM STEVEN J ET UX	25-04 780040000	AC	BERNEZER M F CHURCH BV	25-04 780010000	BA	SOUTH MARCHESS	25-04 780010000	BV	ELMSTERS WILLIAM J	25-04 140010000	CS	PETRELLI CATHY A CARL R	25-04 780010000	DP
K	DANAHAY MARION ET UX	25-04 139007000	AC	HUBER FREDERICK M ET UX	25-04 780060000	BB	ROBERTS MIDGE WYLLIE FRPT	25-04 780010000	BW	ELMSTERS WILLIAM J	25-04 140010000	CV	WINE PASHER C ET UX	25-04 780020000	DR
L	HILL DENNIS TOBE & TAMAR SUZ	25-04 780010000	AK	SMITHSON PATRICIA A LIFE	25-04 780010000	BC	ROBERTS MIDGE WYLLIE FRPT	25-04 780010000	BX	ELMSTERS WILLIAM J	25-04 140010000	CY	WINE PASHER C ET UX	25-04 780020000	ET
M	RATHOFF JEFFERY C	25-04 780010000	AV	BLIOTT KRISTA JO & DAVID LEE	25-04 780020000	BD	GABRIELSON MATHIEW & USA M	25-04 139000000	BY	ELMSTERS WILLIAM J	25-04 140010000	DA	WINE PASHER C ET UX	25-04 780020000	FA
N	LAGUNNEY MICHAEL D ET UX	25-04 780010000	AV	SMITHSON PATRICIA A LIFE	25-04 780010000	BE	ROBERTS MIDGE WYLLIE FRPT	25-04 139000000	BZ	ELMSTERS WILLIAM J	25-04 140010000	DB	WINE PASHER C ET UX	25-04 780020000	GA
O	DANAHAY SHAWN T & KELLY J	25-04 139007000	AK	TRACY CHARLON ET UX	25-04 780010000	BF	FRIGHT TAMARA A CHRISTOPHER J	25-04 780010000	CA	WILSON KATHY ANN	25-04 140010000	DD	WINE PASHER C ET UX	25-04 780020000	GB
P	BLEN CHARLES W ET UX	25-04 780010000	AK	TRACY CHARLON ET UX	25-04 780010000	BG	FRIGHT TAMARA A CHRISTOPHER J	25-04 780010000	CB	WILSON KATHY ANN	25-04 140010000	DE	WINE PASHER C ET UX	25-04 780020000	GC
Q	HASSEL CHARLES GILBERT ET UX	25-04 780010000	AK	BERGOW JAMES E ET UX	25-04 780070000	BH	FRIGHT TAMARA A CHRISTOPHER J	25-04 780010000	CC	WILSON KATHY ANN	25-04 140010000	DF	WINE PASHER C ET UX	25-04 780020000	GD
R	WATNE CHARIS M ET UX	25-04 780010000	AN	DAVID DAVID	25-04 780030000	BI	FRIGHT TAMARA A CHRISTOPHER J	25-04 780010000	CD	WILSON KATHY ANN	25-04 140010000	DG	WINE PASHER C ET UX	25-04 780020000	GE
S	REINA LINDA A & CAROL M - WIDOW	25-04 780010000	AO	HEWARTH PAUL A & ET UX	25-04 780070000	BJ	FRIGHT TAMARA A CHRISTOPHER J	25-04 780010000	CE	WILSON KATHY ANN	25-04 140010000	DH	WINE PASHER C ET UX	25-04 780020000	GF
T	MICHAEL KRISTEN ET UX	25-04 780010000	AP	KOHN DAVID WYLLIE ET UX	25-04 780010000	BK	HILL KENNETH B	25-04 780010000	CF	WILSON KATHY ANN	25-04 140010000	DI	WINE PASHER C ET UX	25-04 780020000	GG
U	ELMSTERS WILLIAM J	25-04 780010000	AM	MARION JAMES ET UX & GARRIE R	25-04 780010000	BL	HILL KENNETH B	25-04 780010000	CG	WILSON KATHY ANN	25-04 140010000	DJ	WINE PASHER C ET UX	25-04 780020000	GH
V	WYERS BARBARA A - LIFE	25-04 780040000	AM	MARION JAMES ET UX & GARRIE R	25-04 780010000	BM	HILL KENNETH B	25-04 780010000	CH	WILSON KATHY ANN	25-04 140010000	DK	WINE PASHER C ET UX	25-04 780020000	GI

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

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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.

4705102142 03/01/2019

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

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

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

Date of Notice: 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: West Virginia UTM NAD 83 Easting: 520415.49
County: Marshall Northing: 4413085.83
District: Clay Public Road Access: CR 21 Robert Ridge Road
Quadrangle: Powhatan Point, WV 7.5' Generally used farm name: Freeland
Watershed: Short Creek - Ohio River

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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting 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.

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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 HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

(at the address listed in the records of the sheriff at the time of notice):

Name: 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>520415.49</u>
County: <u>Marshall</u>	Northing: <u>4413085.83</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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/dcfault.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.

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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, _____, 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>520415.49</u>
County:	<u>Marshall</u>		Northing:	<u>4413085.83</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>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Joseph H. Freeland</u></p> <p>Print Name: <u>Joseph H. Freeland</u></p> <p>Date: <u>11-30-18</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</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.

RECEIVED
Office of Oil and Gas
DEC 17 2018
WV Department of
Environmental Protection

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 Easting:	<u>520415.487</u>
County:	<u>Marshall</u>	UTM NAD 83 Northing:	<u>4413085.813</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>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: _____</p> <p>Print Name: _____</p> <p>Date: _____</p>
	<p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: <u>Murray American Energy Inc.</u></p> <p>By: <u>Mason Smith</u></p> <p>Its: <u>Coal pit + 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.

RECEIVED
Office of Oil and Gas
10/29/18
WV Department of
Environmental Protection

03/01/2019



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 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Freeland Pad, Marshall County
Freeland M01H

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

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Office of Oil and Gas

DEC 17 2018

WV Department of
Environmental Protection

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

4705102142 03/01/2019

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

RECEIVED
Office of Oil and Gas

DEC 17 2013

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 MAGARCEE
EMAIL ADDRESS: jmagarcee@ceecinc.com
GEOTECHNICAL ENGINEER CONTACT: ARON LAVAGE
EMAIL ADDRESS: alavage@ceecinc.com

SITE COORDINATES AND WATERSHED

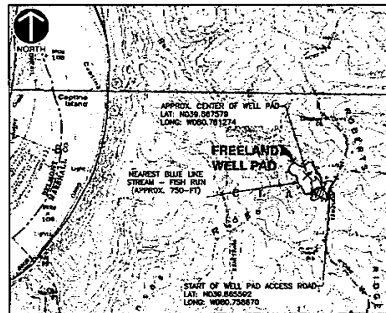
START OF WELL PAD ACCESS ROAD
LATITUDE: 39.865592° N, LONGITUDE: 80.756670° W

APPROXIMATE CENTER OF WELL PAD
LATITUDE: 39.865592° 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

Wellpad No.	Northing	Eastng	Latitude (North)	Longitude (West)
01A	500597.5170	1614489.8966	39.8675665	80.7612906
02A	500595.5632	1614494.5388	39.8675837	80.7612910
03A	500605.6294	1614529.2615	39.8676208	80.7613194
04A	500615.6555	1614531.9800	39.8676179	80.7613444
05A	500621.7017	1614535.7166	39.8676151	80.7612962
06A	500627.7479	1614549.4440	39.8676522	80.7615476
07A	500633.7941	1614551.1715	39.8676493	80.7609990
08A	500639.8402	1614576.8989	39.8676564	80.7609904
09A	500641.2181	1614482.4417	39.8676586	80.7612884
10A	500647.2643	1614496.1632	39.8676757	80.7612878
11A	500649.1105	1614509.8906	39.8676928	80.7611892
12A	500649.1567	1614513.6181	39.8677100	80.7611108
13A	500655.2029	1614537.3516	39.8677171	80.7610970
14A	500661.2491	1614551.0841	39.8677442	80.7610434
15A	500667.2952	1614567.8166	39.8677613	80.7609918
16A	500670.3514	1614497.8040	39.8677877	80.7613117
17A	500676.4016	1614531.5316	39.8677848	80.7611854
18A	500682.4578	1614525.2592	39.8678020	80.7611165
19A	500688.5040	1614538.9867	39.8678291	80.7610829



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

SCALE IN FEET
0 2000 4000

REFERENCE
U.S.G.S. 7.5" TOPOGRAPHIC MAP, POPULATION PROFILE
QUADRANGLE 01-N-14 DATED 1950, PHOTOLOGUED:
1972 AND 1976, PHOTORESPICED: 1984.

LEGEND

---	EXISTING PROPERTY LINE	---	PROPOSED LIMIT OF DISTURBANCE	---	30" x 30" G.P.	PROPOSED COMPOST FILTER SOCK TRAP
---	EXISTING INDEX CONTOUR	---	PROPOSED EDGE OF ACCESS ROAD/PAV	---	30" x 30" G.P.	PROPOSED 18-IN COMPOST FILTER SOCK
---	EXISTING INTERMEDIATE CONTOUR	---	PROPOSED DRAVEL	---	30" x 30" G.P.	PROPOSED 24-IN COMPOST FILTER SOCK
---	EXISTING PAVED ROADWAY	---	PROPOSED ASPHALT PAVEMENT	---	30" x 30" G.P.	PROPOSED 33-IN COMPOST FILTER SOCK
---	EXISTING GRAVELLED ROADWAY	---	PROPOSED CONCRETE/FORM BERM	---	30" x 30" G.P.	PROPOSED ORANGE CONSTRUCTION FENCE
---	EXISTING STRUCTURE/OUTCROCK	---	PROPOSED WELLHEAD AND CELLAR	---	30" x 30" G.P.	PROPOSED ROCK CONSTRUCTION ENTRANCE
---	EXISTING STREAM	---	PROPOSED INDEX CONTOUR	---	30" x 30" G.P.	PROPOSED RALET PROTECTION
---	STREAM AND WETLAND DELINEATION BOUNDARY	---	PROPOSED INTERMEDIATE CONTOUR	---	30" x 30" G.P.	PROPOSED EROSION CONTROL BLANKET
---	EXISTING WETLAND	---	PROPOSED SPOT ELEVATION	---	30" x 30" G.P.	
---	EXISTING OVERHEAD ELECTRIC LINE	---	PROPOSED CUT/FILL LINE	---	30" x 30" G.P.	
---	EXISTING WATERLINE	---	PROPOSED CHANNEL	---	30" x 30" G.P.	
---	EXISTING TELECOMMUNICATION LINE	---	PROPOSED STORMWATER CULVERT	---	30" x 30" G.P.	
---	EXISTING STORMWATER CULVERT	---	PROPOSED RALET	---	30" x 30" G.P.	
---	EXISTING TREE LINE	---	PROPOSED ASPHALT APRON	---	30" x 30" G.P.	
---	EXISTING WATER METER	---	PROPOSED UNDERDRAIN	---	30" x 30" G.P.	
---	EXISTING UTILITY POLE	---		---		
---	EXISTING RALET	---		---		

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

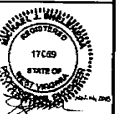
WETLAND 1A (PEM) - 7 FT FROM LOD
WETLAND 1B (PEM) - 5 LF FROM LOD
WETLAND 2 (PSS) - 2 LF FROM LOD
WETLAND 4 (PEM/PSS) - 10 LF FROM LOD

REFERENCES

- STREAMS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
- UNDERGROUND UTILITIES LOCATED BY A GEOPHYSICAL SURVEY CONDUCTED BY THE GEOPHYSICS LTD. DATED 06/23/2017 TO 05/29/2017.
- 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	GEOTECHNICAL SUBSURFACE SUMMARY	X	11/14/2018
GE 501	GEOTECHNICAL SUBSURFACE CROSS-SECTIONS	X	11/14/2018
GE 502	GEOTECHNICAL NOTES AND TABLES	X	11/14/2018
GE 503	GEOTECHNICAL DETAILS	X	11/14/2018
GE 504	RSS PLAN AND ELEVATION VIEW (1 OF 2)	X	11/14/2018
GE 505	RSS PLAN AND ELEVATION VIEW (2 OF 2)	X	11/14/2018
GE 506	RSS CROSS-SECTION (1 OF 3)	X	11/14/2018
GE 507	RSS CROSS-SECTION (2 OF 3)	X	11/14/2018
GE 508	RSS CROSS-SECTION (3 OF 3)	X	11/14/2018
GE 509	RSS SPECIFICATIONS AND QUANTITIES	X	11/14/2018
GE 510	RSS DETAILS	X	11/14/2018
PC 600	SITE PLAN WITH AERIAL	X	11/14/2018
PC 601	POST-CONSTRUCTION RECLAMATION PLAN	X	11/14/2018
PC 602	POST-CONSTRUCTION RECLAMATION DETAILS	X	11/14/2018

Civil & Environmental Consultants, Inc.
4000 Triangle Lane, Suite 200 - Export, PA 15832
724-327-5200 - 800-899-9419



REVISION RECORD	NO.	DATE	DESCRIPTION
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		

FREELAND WELL PAD
CLAY DISTRICT
MARSHALL COUNTY, WEST VIRGINIA
PREPARED FOR:
CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY
CORAOPOLIS, PA 15108

MISS UTILITY OF
WEST VIRGINIA
1-800-245-4848
West Virginia State Law
(Section 27c, 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: 172-040
Drawing Scale: 1/2"=20'-0"
Date Issued: 1/11/2019
Index Number:
Drawn By: EWS
Checked By: JMS
Project Manager: JMS

CS 000



APPROVED WVDEP OOG
 J 01/26/2019

- LEGEND**
- EXISTING PROPERTY LINE
 - EXISTING WETLAND BOUNDARY
 - EXISTING INTERMEDIATE CONTOUR
 - EXISTING PAVED HIGHWAY
 - EXISTING UNPAVED HIGHWAY
 - EXISTING STRUCTURE (FOUNDATION)
 - EXISTING STREAM
 - STREAM AND WETLAND DELINEATION BOUNDARY
 - EXISTING WETLAND
 - EXISTING DRAINAGE ELECTRIC LINE
 - EXISTING WATER MAIN
 - EXISTING TELECOMMUNICATION LINE
 - EXISTING STORMWATER CULVERT
 - EXISTING TREE LINE
 - EXISTING WATER METER
 - EXISTING UTILITY HOLE
 - EXISTING ALLEY
 - PROPOSED LIMIT OF DISTURBANCE
 - PROPOSED EDGE OF ACCESS ROAD/PAD
 - PROPOSED CHANNEL
 - PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE PAVEMENT
 - PROPOSED WALKWAY AND CURB
 - PROPOSED WALKWAY
 - PROPOSED WETLAND BOUNDARY
 - PROPOSED INSTRUMENTAL CONTROL
 - PROPOSED SHIP PILING
 - PROPOSED CUT/FILL LINE
 - PROPOSED COMPOST FILTER SOCK TRAP
 - PROPOSED 18-IN COMPOST FILTER SOCK
 - PROPOSED 24-IN COMPOST FILTER SOCK
 - PROPOSED 30-IN COMPOST FILTER SOCK
 - PROPOSED GRAVITY CONSTRUCTION ENTRANCE
 - PROPOSED ROCK CONSTRUCTION ENTRANCE
 - PROPOSED HOLE PROTECTION
 - PROPOSED CHANNEL
 - PROPOSED STORMWATER EXHURTER
 - PROPOSED ALLEY
 - PROPOSED BRUSH ARROW
 - PROPOSED UNDERDRAIN
 - PROPOSED EROSION CONTROL, BARRIERS
- LOCAL NUMBER
 LOCAL LOCATION

- STREAM AND WETLAND NOTES**
- WETLAND BOUNDARIES ARE BEING RECALCULATED FOR THE FINAL PLAN (AS NOTED) 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 EPHEMERAL OR PERENNIAL. AS SUCH, A WATERSHED IS NOT BEING RECALCULATED FOR PERENNIAL STREAMS.
 - DEMOSICS SHOWN HEREIN ARE MEASURED FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

- COMPACTION SPECIFICATIONS**
- FINISH SOIL FILL MATERIALS USING COMPACTION EQUIPMENT WITH GREATER THAN 10-TON WEIGHT IN COMPACTED LIFTS NOT EXCEEDING 12 INCHES THICK. USE A REQUIRED LIFT THICKNESS OF 4 INCHES (MAXIMUM) IN AREAS WHERE STEEL-PLATE TAMPERS OR OTHER UNIFORM-COMPACTOR COMPACTORS ARE BEING USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 4 INCHES IN CONCRETE FILL AREAS. REQUIRED ALUMINUM PARTICLE FILTER COMPACTORS ARE UTILIZED. IN AREAS WHERE HAND-OPERATED COMPACTORS ARE USED, WASTE INCORPORATED PARTICLES EXCEEDING THE MAXIMUM PARTICLE SIZE INDICATED ABOVE OUTSIDE OF THE PROPOSED LIMIT AREA OR IN OTHER AREAS OF FILL, FINISHED ROCK PARTICLES (E.G. MATERIALS EXCEEDING 6 INCHES) PLACED IN THE EXISTING LIMITS OF FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 24 INCHES. LIFTS SHOULD BE COMPACTED IN SEVERAL PASSES USING HEAVY CONSTRUCTION EQUIPMENT.
 - COMPACT ALL PAD AND ROADWAY SUBGRADES AND EACH LIFT OF FILL MATERIAL TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITHIN ±5 PERCENT OF THE OPTIMUM MOISTURE CONTENT. DETERMINE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D1557 (STANDARD METHOD).
 - ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED REPAVED/REPAVED SOIL (RES) AREAS. REFER TO DEMOSIC 2007 THROUGH 2017 FOR ADDITIONAL INFORMATION.

- REFERENCES**
- STREAMS AND WETLANDS DELINEATED BY ENV & ENVIRONMENTAL CONSULTANTS, INC. DATED 06/24/2017.
 - UNDERGROUND UTILITIES LOCATED BY A GEOPHYSICAL SURVEY CONDUCTED BY THE GEOPHYSICIST (ID DATED 05/23/2017 TO 05/25/2017).
 - UTILITY FEATURES SURVEYED BY ENV & ENVIRONMENTAL CONSULTANTS, INC. DATED 06/09/2017 TO 06/12/2017.
 - TOPOGRAPHY SURVEYED BY UNMANNED AERIAL VEHICLE (UAV) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/16/2018.
 - PERMITS/INSURANCES WERE REVIEWED BY AEROSOL.

MESS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 Mess Utility Service Line
 Section 306, Chapter 24-2, requires that you call before digging any service you own in the state of West Virginia.
IT'S THE LAW

SCALE IN FEET
 0 50 100

CEE
 Civil & Environmental Consultants, Inc.
 3001 Triangle Lane, Suite 102 • Airport, VA 24502
 754-272-8261 • fax-754-541-6116



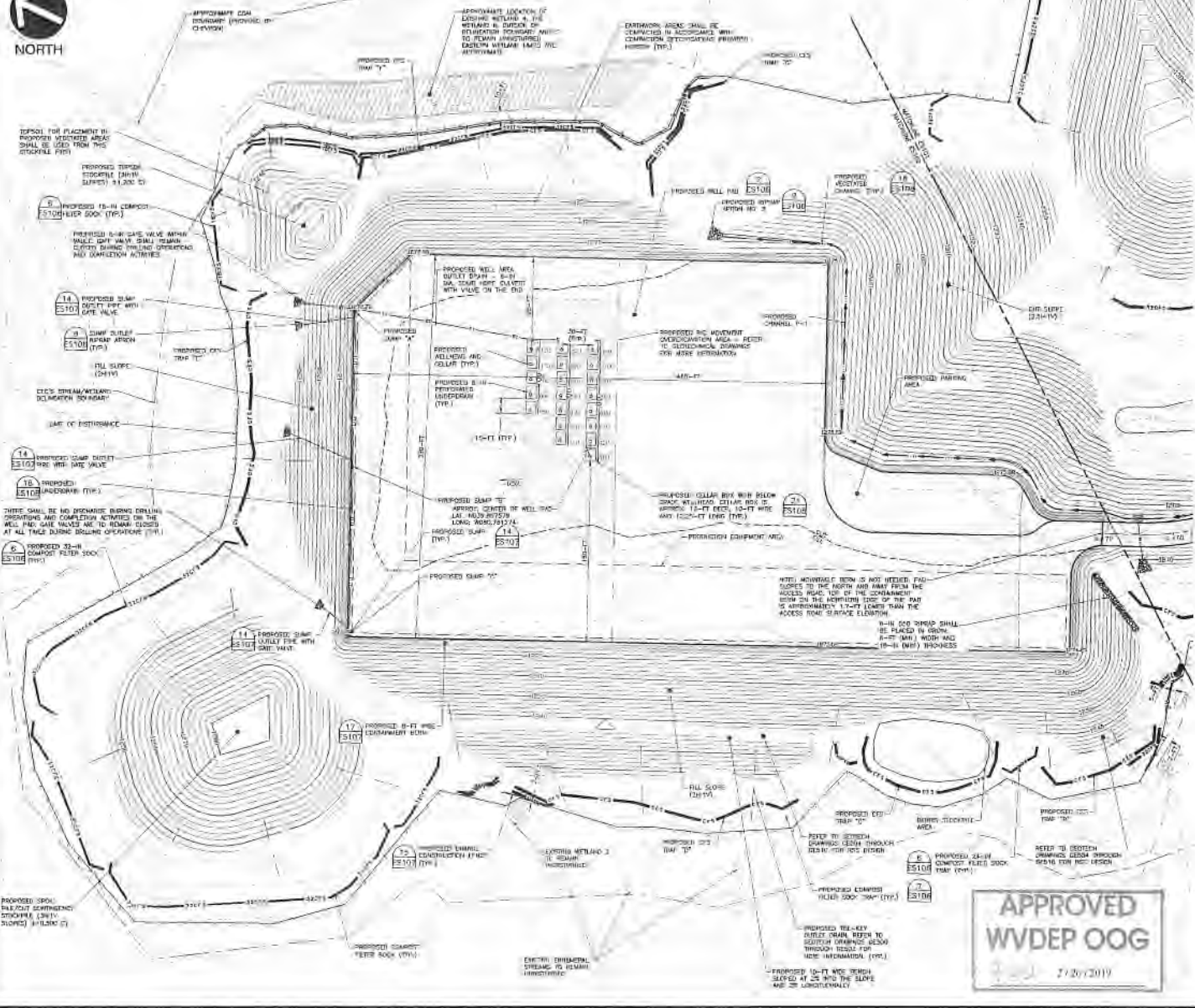
REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/26/2019	ISSUED FOR PERMIT

FREELAND WELL PAD
 CLAY DISTRICT
 JEFFERSON COUNTY, WEST VIRGINIA
 PREPARED FOR
CHEVRON APPALACHIA, LLC
 700 CHERKINGTON PARKWAY
 CORTLANDVILLE, PA 15105

EROSION AND SEDIMENT CONTROL PLAN (OF 2)
 Project Number: 122400
 Drawing Date: 12/06
 Drawing Number: 12240001
 Issue Number: 01
 Date: 01/26/2019
 Project Manager: J.E.J.

ES 101



LEGEND

	EXISTING PROPERTY LINE
	EXISTING ROCK CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	EXISTING SHADED STREAM
	EXISTING UNSHADED STREAM
	EXISTING STREAM STRUCTURE (W/OUT/DND)
	EXISTING STREAM
	STREAM AND WETLAND DELINEATION BOUNDARY
	EXISTING WETLAND
	EXISTING STREAMSIDE ELEVATION LINE
	EXISTING WETLAND
	EXISTING RIDGE LINE
	EXISTING ROAD
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED EDGE OF ACCESS ROAD/RW
	PROPOSED BARRIER
	PROPOSED GRAVEL PAD/FOOT
<td>PROPOSED COMPACTED GEOM.</td>	PROPOSED COMPACTED GEOM.
	PROPOSED WELLHEAD AND CELLAR
	PROPOSED ROCK CONTOUR
	PROPOSED INTERMEDIATE CONTOUR
	PROPOSED SPOT ELEVATION
	PROPOSED 12x12 FT FILTER SOCK TRAP
	PROPOSED 18-IN COMPACT FILTER SOCK
	PROPOSED 24-IN COMPACT FILTER SOCK
	PROPOSED 33-IN COMPACT FILTER SOCK
	PROPOSED DEBRIS CONCENTRATION FENCE
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	PROPOSED SILT PROTECTION
	PROPOSED CHANNEL
	PROPOSED STORMWATER CULVERT
	PROPOSED PIPE
	PROPOSED BARRIER ACCESS
	PROPOSED UNDERPASS
	PROPOSED EROSION CONTROL SILTOUT
	DETAIL NUMBER
	DETAIL LOCATION

STREAM AND WETLAND NOTES

1. WETLAND BOUNDARIES ARE BEING REQUESTED FOR THE FOLLOWING FOUR (4) WETLANDS THAT ARE LOCATED WITHIN 100-FT OF THE LIMIT OF DISTURBANCE WETLANDS WA, WB, WC AND WD.
2. THE STREAMS SHOWN HEREON OUTSIDE THE LIMIT OF DISTURBANCE ARE EXPLORED OR PRESUMED AS SUCH & SHOULD BE NOT BEING RELEASED FOR HERONAL STREAMS.
3. DIMENSIONS SHOWN HEREON ARE MEASURED FROM THE EDGE OF THE WETLAND TO THE PROPOSED LIMIT OF DISTURBANCE.

COMPACTION SPECIFICATIONS

1. PLACE SIZE FILL MATERIALS USING COMPACTION TABLETOP WITH GREATER THAN 10-TON WEIGHT IN COMPACTED LIFTS NOT EXCEEDING 12 INCHES THICK. USE A REVERSE DOZE LIFT THICKNESS OF 4 INCHES (MAXIMUM) IN AREAS WHERE STEEL-PLATE TAPEDECK OR OTHER HAND-OPERATED COMPACTORS ARE USED. MAXIMUM PARTICLE SIZE SHOULD NOT EXCEED 6 INCHES IN STRUCTURE FILL AREAS WHERE HEAVY STEEL-PLATE COMPACTORS ARE UTILIZED. A REFINED MAXIMUM PARTICLE SIZE OF 3 INCHES SHOULD BE USED IN AREAS WHERE HAND-OPERATED COMPACTORS ARE USED. WASTE OVERSIZE PARTICLES EXCEEDING THE MAXIMUM PARTICLE SIZE INDICATED ABOVE, OUTSIDE OF THE PROPOSED FILL AREAS OR IN EXISTING AREAS OF FILL, OVERSIZE ROCK PARTICLES (I.E. MATERIALS EXCEEDING 6 INCHES) PLACED IN THE TOP LIFTS OF FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 24 INCHES. LIFTS SHOULD BE COMPACTED BY SEVERAL PASSES USING HEAVY COMPACTION EQUIPMENT.
2. COMPACT ALL PAD AND ROADWAY SUBGRADES AND EACH LIFT OF FILL MATERIAL TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY WITHIN 45 PERCENT OF THE OPTIMUM MOISTURE CONTENT. DETERMINE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698 (CONGREGATE FRODOUR).
3. ADDITIONAL SPECIFICATIONS ARE REQUIRED FOR THE PROPOSED REFINISHED SOIL SLOPE (RSS) AREAS REFER TO DRAWINGS C000 THROUGH C004 FOR ADDITIONAL INFORMATION.

REFERENCES

1. STREAMS AND WETLANDS DELINEATED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 05/24/2017.
2. UNDERGROUND UTILITIES LOCATED BY A GEOLOGICAL SURVEY CONDUCTED BY THE RECORDERS LTD. DATED 10/23/2017 TO 05/25/2017.
3. UTILITY FEATURES SURVEYED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 08/29/2017 TO 07/12/2017.
4. SITE PLAN SURVEYED VIA UNMANNED AERIAL VEHICLE (UAV) BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. DATED 04/15/2018.
5. PROPERTY PARCEL MAPS WERE PROVIDED BY CHEVRON.

MISS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 West Virginia State Law
 (Article, 20th Chapter 24C) requires that you
 call law utilities first before
 you dig in the earth. Call before you dig.
IT'S THE LAW

APPROVED WVDEP OOG
 7/20/2019

SCALE: 1/4" = 1'-0"

Civil & Environmental Consultants, Inc.
 4018 Triangle Lane, Suite 300 • Elkins, PA 15232
 724.237.0000 • www.cceci.com

REVISION RECORD

NO.	DATE	DESCRIPTION
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FREELAND WELL PAD
 CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 MARKERS, LLC, CONTRACTOR
CHEVRON APPALACHIA, LLC
 FREELAND WELL PAD 2
 COURTESY, PA, 01010

EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)

Project Number: 13326
 Drawing Title: 13326
 Date Issued: 11/20/2018
 Inter-Number:
 Other No. BLD:
 Project Manager: MS

ES 102