



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

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

Tuesday, August 15, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

CHEVRON APPALACHIA, LLC
700 CHERRINGTON PARKWAY

CORAOPOLIS, PA 15108

Re: Permit approval for HINES M06H
47-051-01928-00-00

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: HINES M06H
Farm Name: DANALD HINES ET UX
U.S. WELL NUMBER: 47-051-01928-00-00
Horizontal 6A / New Drill
Date Issued: 8/15/2017

Promoting a healthy environment.

08/18/2017

PERMIT CONDITIONS 05101928

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 705101928

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.



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601 57th Street
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(304) 926-0450 fax (304) 926-0452

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

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

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

INTRODUCTION

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

FINDINGS OF THE CHIEF

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

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

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “[i]n addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “[n]o well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the Office of Oil and Gas shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The Office of Oil and Gas may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary.”

ORDER

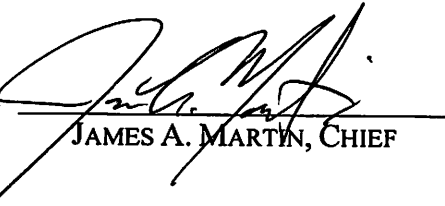
West Virginia Code §22-6A-12(b) requires, in part, that “[n]o well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetlands 2A and 2B from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit applications identified as API#s 47-051-01926, 47-051-01927, 47-051-01928, 47-051-01929, 47-051-01930, 47-051-01931, 47-051-01932 and 47-051-01933. The Office of Oil and Gas hereby **ORDERS** that Chevron shall meet the following site construction and operational requirements for the Hines Well Pad:

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

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

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: 
JAMES A. MARTIN, CHIEF



March 2, 2017

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25304

Dear Reviewer:

Subject: Wetland and Perennial Stream Waiver Request Form
Chevron Appalachia, LLC
Hines Well Pad Project
Washington District, Marshall County, West Virginia
CEC Project 164-052

1.0 INTRODUCTION

On behalf of Chevron Appalachia, LLC (Chevron), Civil & Environmental Consultants, Inc. (CEC) is submitting a Wetland and Perennial Stream Waiver Request form pursuant to Chapter 22 Article 6A Section 12 of the West Virginia Code. Chevron is requesting a waiver to construct a natural gas well pad within 100 feet of four (4) palustrine emergent wetlands for their proposed Hines Well Pad Project located in Washington District, Marshall County, West Virginia.

Chevron is proposing to construct a natural gas well pad and associated access road. The total limit of disturbance (LOD) for the project is approximately 19 acres. The waiver request form is included in Attachment A. The following figures are included in Attachment B: Site Location Map, Aquatics Impact Map, and Wetland Waiver Request Figure. The Erosion & Sediment Control (E&S) Plan is included in Attachment C. Existing wetlands and streams were delineated by qualified CEC biologists on September 9, 2015 and October 18, 2016. The following section provides additional information as required by the waiver.

2.0 WETLAND WAIVER REQUEST

Question 1: Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.

The proposed Hines Well Pad Project is located off Campbell Hill Road in Washington District, Marshall County, West Virginia southeast of the City of Moundsville, as shown on the Site Location Map. The project's proposed LOD is located within 100 feet of four (4) wetlands, as shown on the Aquatic Impacts Map. The approximate distance of each wetland to the nearest boundary of the LOD is as follows:

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- Wetland 2A – 44 linear feet;
- Wetland 2B – 0.4 linear feet;
- Wetland 3A – 25 linear feet; and
- Wetland 3B – 41 linear feet.

No perennial streams are located within 100 feet of the project LOD. A waiver is not being requested for the wetlands and the ephemeral stream located within the LOD, which includes Wetlands 1A and 1B and an unnamed tributary (UNT) 1 to Toms Run. Chevron is requesting authorization from the U.S. Army Corps of Engineers (USACE) Pittsburgh District for impacts to these features. A copy of the Nationwide Permit 39 Application to the USACE for these impacts is included in Attachment D.

Question 2: Justify the proposed activity by describing alternatives to this project that were considered.

- a. *Include a No-Action Alternative as to show “the future without the project”.*

The No-Action alternative represents “no alteration” of the existing environment, meaning the site would not be developed and no immediate environmental impacts would occur. Oil and gas extraction would not occur at this site, and Chevron would be required to find an alternative site. This option is highly undesirable and would not fulfill the project’s purpose and need.

- b. *Location alternatives must be shown.*

The current single well pad and access road design approach of the Hines Well Pad combines three separate well pads and access roads that were conceptually planned by Chevron in the vicinity of the Hines Well Pad location. The overall earth disturbance of three separate projects would have been greater than the current one pad and access road project. Further, on the Hines property, the current location is the primary desired location due to the size of the proposed well pad and the steep topography of the surrounding area. Minor adjustments to the dimensions of the proposed well pad were made during the conceptual planning phase of the project; however, the current location of the well pad has remained unchanged due to the limitations listed above. The size of the well pad is optimized for the extraction and production equipment that will be set on the well pad. As such, minimizing the dimensions of the well pad beyond the dimensions provided is not feasible. The location of the well pad and LOD are shown on Figure 3 – Wetland Waiver Request Figure provided in Attachment B.

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c. Must demonstrate why a one hundred foot buffer cannot be maintained.

Maintaining a 100-foot buffer from all on-site wetlands is not feasible due to topographic constraints and locations of the existing features. The four (4) wetlands that are located within 100 feet of the LOD are located on the southern side of the proposed well pad and access road. In order to maintain a 100-foot buffer from the four (4) wetlands, the well pad and access road would need to be shifted north, which is not feasible due to the steep topography located to the north of the proposed well pad. In addition, shifting the access to the north would cause the LOD to be within 100 feet of Wetland 5.

The other alternative to meet the setback requirements would be a reduction in the project's footprint; however, the proposed design represents the minimum footprint required to meet the project's purpose and need. A reduction in the well pad's limits would mean the project could not be developed.

d. Describe how the proposed project is the least environmentally damaging practicable alternative.

As stated above, the current Hines Well Pad has been designed to take the place of three separate well pad and access road projects. As such, the singular well pad and access road will have less earth disturbance than the three separate projects. The current proposed Hines Well Pad design represents the alternative which reduces permanent impacts to the greatest degree practicable. Shifting the proposed well pad south or north would create higher fill slopes, and greater disturbance to existing streams and wetlands.

Question 3: Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.

As part of the well pad permitting process, an E&S Plan has been prepared for the Hines Well Pad project which stipulates implementations to reduce soil erosion, compaction, and sedimentation of receiving streams and wetlands. The following measures will be implemented as part of the E&S Plan to protect the existing wetlands and streams:

- Compost filter sock traps will be positioned downslope of larger drainage areas and upslope of the existing wetlands and/or ephemeral streams;
- Compost filter socks will be positioned downslope of smaller drainage areas and upslope of the existing wetlands and/or ephemeral streams;

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- Orange construction fence will be erected along the edge of the LOD to clearly mark and help protect the wetlands from being impacted during construction operations;
- Erosion control blanket will be placed on slopes greater than 3 Horizontal to 1 Vertical (3H:1V) to limit erosion and promote vegetative growth;
- Riprap aprons will be constructed at the outfalls of pipes to dissipate runoff;
- Disturbed areas within the LOD shall be stabilized within 21 days of construction activity temporarily or permanently ceasing; and
- The ephemeral stream located within the LOD and downgradient of the proposed fill slope toe-key outlet drain will be restored to approximate original dimensions and lined with riprap.

Question 4: Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.

- a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect wetlands and/or perennial streams for which the waiver is sought.*

Refer to the E&S Plan and details in Attachment C for locations of erosion control measures, specifications on installation and maintenance requirements, and the construction sequence.

3.0 CLOSING

We appreciate your review of this Wetland and Perennial Stream Waiver Request Form. Please contact Katie Moberg at 724-327-5200 or kmoberg@cecinc.com, if you have any questions or require additional information.

Respectfully submitted,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC



Sarah V. Parker
Assistant Project Manager



Katie L. Moberg
Project Manager

SVP:KLM/jg
Enclosures

cc: Jenny Hayes, Chevron Appalachia, LLC

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ATTACHMENT A

WETLAND AND PERENNIAL STREAM WAIVER REQUEST FORM

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11/3/14

Wetland and Perennial Stream Waiver Request

API Number: 47-051-01928

Operator's Well Number: M06H

Well Operator: Chevron Appalachia, LLC

Well Number: _____ Well Pad Name: Hines Well Pad

County, District, Quadrangle of Well Location: Marshall County, Washington District, Moundsville Quad

Answer the questions below to request a waiver from West Virginia Department of Environmental Protection for any wetlands or perennial streams which lie within one hundred feet of proposed project Limit of Disturbance (LOD), which includes any erosion and sediment control devices to be used.

This waiver shall be requested pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code, which states:

§22-6A-12(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.

§22-6A-12(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.

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Wetland and Perennial Stream Waiver Request

API Number: _____

Operator's Well Number: _____

Answer in the space provided, or use additional pages as necessary to fully answer the questions below:

- 1. Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.**

Please refer to Section 2.0, Question 1 of the letter.

- 2. Justify the proposed activity by describing alternatives to this project that were considered.**

- a. Include a No-Action Alternative as to show "the future without the project"
- b. Location Alternatives must be shown
- c. Must demonstrate why a one hundred foot buffer cannot be maintained
- d. Describe how the proposed project is the least environmentally damaging practicable alternative

Please refer to Section 2.0, Question 2 of the letter.

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Wetland and Perennial Stream Waiver Request

API Number: _____

Operator's Well Number: _____

3. **Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.**

Please refer to Section 2.0, Question 3 of the letter.

4. **Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.**

- a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.

Please refer to Section 2.0, Question 4 of the letter.

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ATTACHMENT B

FIGURES

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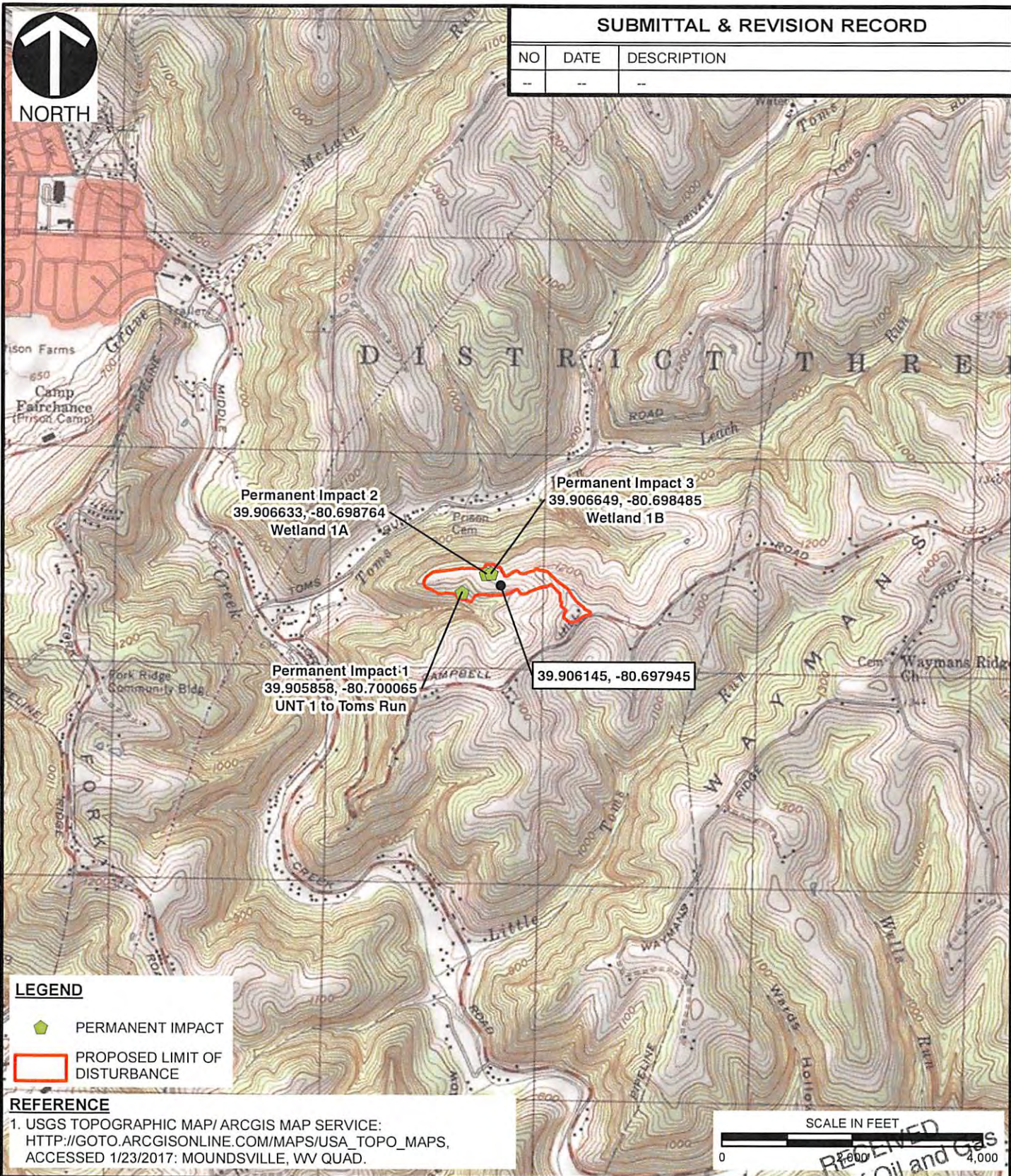
08/18/2017





NORTH

SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
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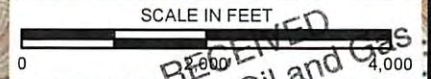


LEGEND

-  PERMANENT IMPACT
-  PROPOSED LIMIT OF DISTURBANCE

REFERENCE

1. USGS TOPOGRAPHIC MAP/ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgisonline.com/maps/usa_topo_maps),
 ACCESSED 1/23/2017: MOUNDSVILLE, WV QUAD.



Civil & Environmental Consultants, Inc.

4000 Triangle Lane, Suite 200 - Export, PA 15632
 724-327-5200 · 800-899-3610
www.cecinc.com

CHEVRON APPALACHIA, LLC
 HINES WELL PAD
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA

USGS SITE LOCATION MAP

DRAWN BY: JDM	CHECKED BY: SVP	APPROVED BY: <i>Hand signature</i> PAK* <small>on file</small>	FIGURE NO: 0818/2017
DATE: 01/24/2017	SCALE: 1" = 2,000'	PROJECT NO: 164-052	

P:\2016\164-052-GIS\maps\WV\164-052.FIG_1_NWP_SITE_LOC.mxd 1/23/2017 7:24 PM (imendicino)

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 APR 24 2017
 WV Department of Environmental Protection



REVISION RECORD	
NO.	DATE

SUBMITTAL RECORD	
NO.	DATE

- LEGEND**
- WETLAND IMPACT
 - WETLAND (FW)
 - DELTATION BOUNDARY
 - PROPOSED LIMIT OF DISTURBANCE
 - PHYSICAL STREAM
 - STREAM IMPACT
 - HIGH STREAM

- REFERENCES**
- NATIONAL HYDROLOGIC DATASET: US GEOLOGICAL SURVEY, 2011
 - WATER CLIMATE GUIDE: US CONTOUR
 - WORLD WILDERNESS MONITORING AND SURVEILLANCE PROGRAM: WILDERNESS MONITORING AND SURVEILLANCE PROGRAM, 2014

NOTES

1. CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) HAS CONDUCTED THE WETLAND AND STREAM IMPACT ANALYSIS FOR THE PROJECT DESCRIBED IN THE TITLE HEREIN.
2. CIVIL & ENVIRONMENTAL CONSULTANTS, INC. HAS CONDUCTED THE WETLAND AND STREAM IMPACT ANALYSIS FOR THE PROJECT DESCRIBED IN THE TITLE HEREIN.
3. THE ANALYSIS WAS CONDUCTED IN ACCORDANCE WITH THE REGULATIONS OF THE MARSHALL COUNTY BOARD OF SUPERVISORS AND THE MARSHALL COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION.
4. THE ANALYSIS WAS CONDUCTED IN ACCORDANCE WITH THE REGULATIONS OF THE MARSHALL COUNTY BOARD OF SUPERVISORS AND THE MARSHALL COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION.
5. THE ANALYSIS WAS CONDUCTED IN ACCORDANCE WITH THE REGULATIONS OF THE MARSHALL COUNTY BOARD OF SUPERVISORS AND THE MARSHALL COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Civil & Environmental Consultants, Inc.

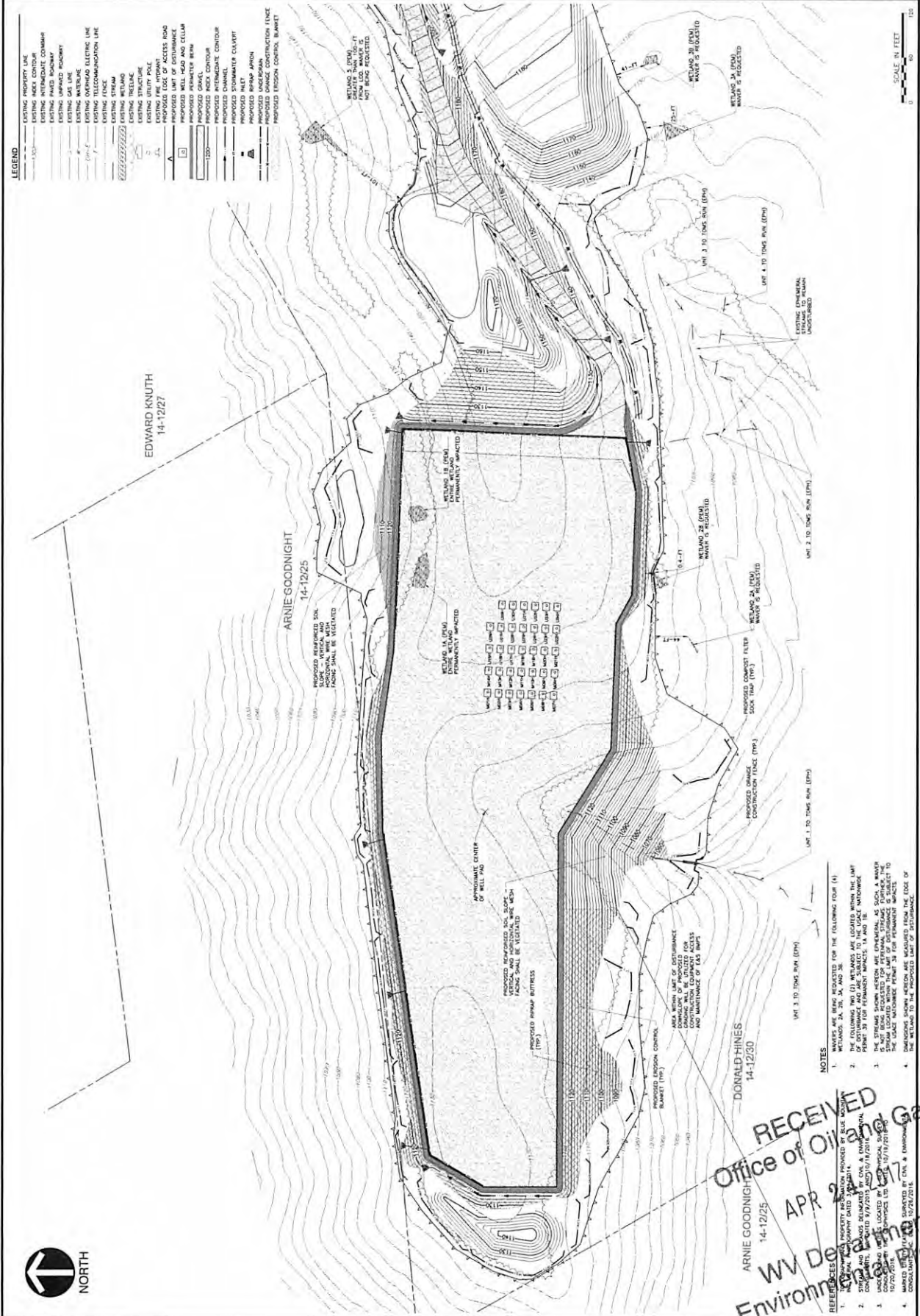
CHEVRON APPALACHIA, LLC
 HINES WELL PAD
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA

SCALE IN FEET
 0 100 200 300 400

AQUATIC IMPACTS MAP

2

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ATTACHMENT C
EROSION AND SEDIMENT CONTROL PLAN

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FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY

NOTES

- THE CLIENT IS REQUESTING THE PREPARED CENTER OF HIGHWAY CONSTRUCTION DETAILS FOR ALLS WITH THE INTENT OF PROVIDING THE BEST PRACTICE CONSTRUCTION DETAILS TO BE USED FOR THE PROJECT.
- THE CLIENT IS REQUESTING THE PREPARED CENTER OF HIGHWAY CONSTRUCTION DETAILS FOR ALLS WITH THE INTENT OF PROVIDING THE BEST PRACTICE CONSTRUCTION DETAILS TO BE USED FOR THE PROJECT.
- THE CLIENT IS REQUESTING THE PREPARED CENTER OF HIGHWAY CONSTRUCTION DETAILS FOR ALLS WITH THE INTENT OF PROVIDING THE BEST PRACTICE CONSTRUCTION DETAILS TO BE USED FOR THE PROJECT.

DATE: 03/21/2018
 DRAWN BY: JAY
 CHECKED BY: JAY
 PROJECT: HINES WELL SITE PLAN OVERVIEW

LEGEND

---	EXISTING PROPERTY LINE
---	EXISTING ROAD CENTERLINE
---	EXISTING ROAD RIGHT-OF-WAY
---	EXISTING ROAD BOUNDARY
---	EXISTING LOT LINE
---	EXISTING LOT CORNER
---	EXISTING DRIVEWAY
---	EXISTING DRIVEWAY CENTERLINE
---	EXISTING DRIVEWAY RIGHT-OF-WAY
---	EXISTING DRIVEWAY BOUNDARY
---	EXISTING DRIVEWAY CENTERLINE
---	EXISTING DRIVEWAY RIGHT-OF-WAY
---	EXISTING DRIVEWAY BOUNDARY
---	EXISTING DRIVEWAY CENTERLINE
---	EXISTING DRIVEWAY RIGHT-OF-WAY
---	EXISTING DRIVEWAY BOUNDARY
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---	EXISTING DRIVEWAY BOUNDARY
---	EXISTING DRIVEWAY CENTERLINE
---	EXISTING DRIVEWAY RIGHT-OF-WAY
---	EXISTING DRIVEWAY BOUNDARY

EXISTING SURVEY DATA IN COLOR YARDS

Point	Height	Notes
101	57.820	
102	64.700	
103	18.000	
104	11.240	
105	11.840	
106	7.290	
107	3.790	
108	14.520	
109	11.200	
110	1.200	
111	11.200	

WATER UTILITY OF WEST VIRGINIA

Feature	Number	Easting	Latitude (North)	Longitude (West)
Water Main	15100101	151095.327	39 00 49.9	80 59 59.1
Water Main	15100102	151096.327	39 00 49.9	80 59 59.1
Water Main	15100103	151097.327	39 00 49.9	80 59 59.1



WATER UTILITY OF WEST VIRGINIA

1-800-245-4848

What's the problem? Call us. We'll solve it. We'll be there when you need us.

115 THE LAW

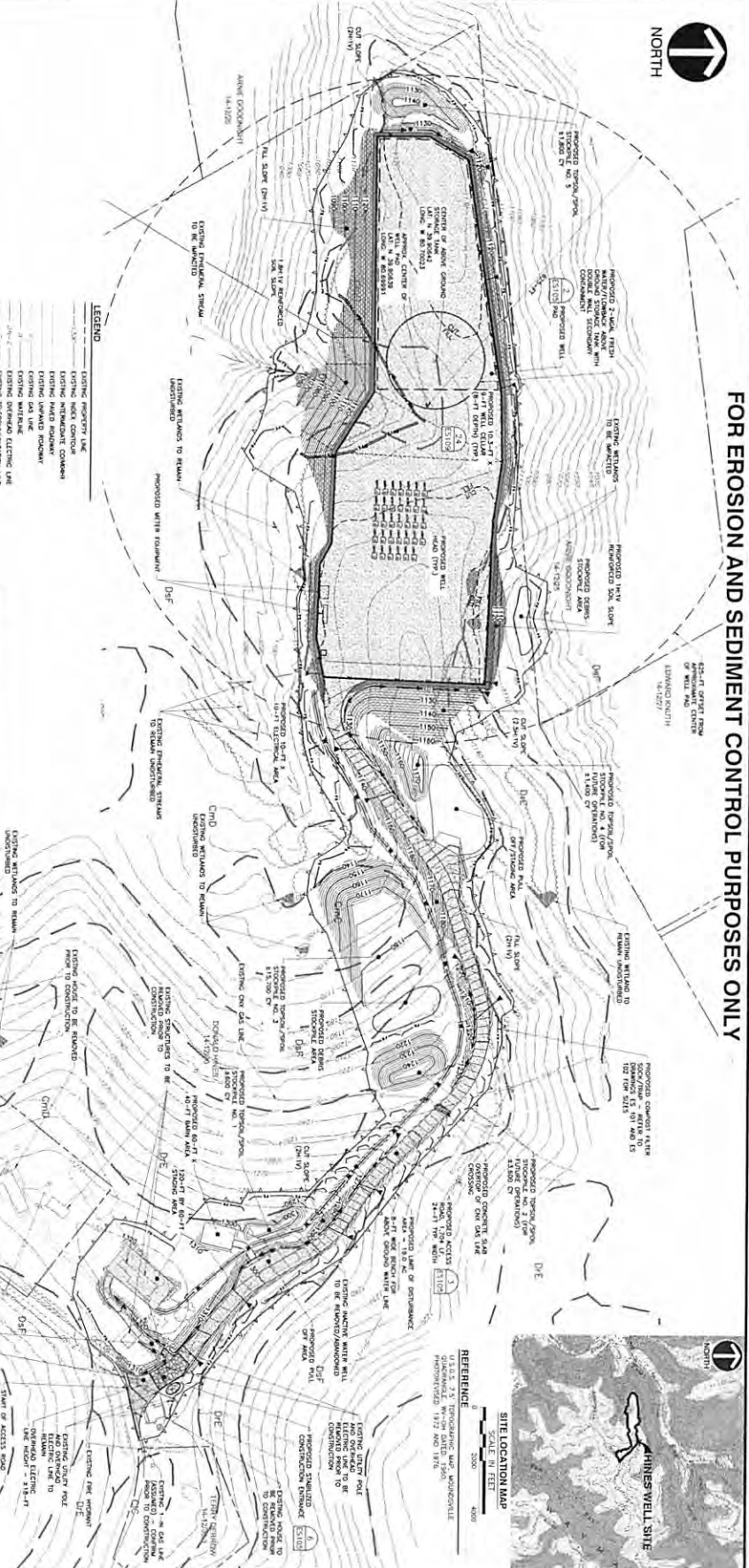


HINES WELL SITE

WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA

PREPARED FOR:
CHEVRON APPALACHIA, LLC

800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478



REVISION RECORD

NO.	DATE	DESCRIPTION
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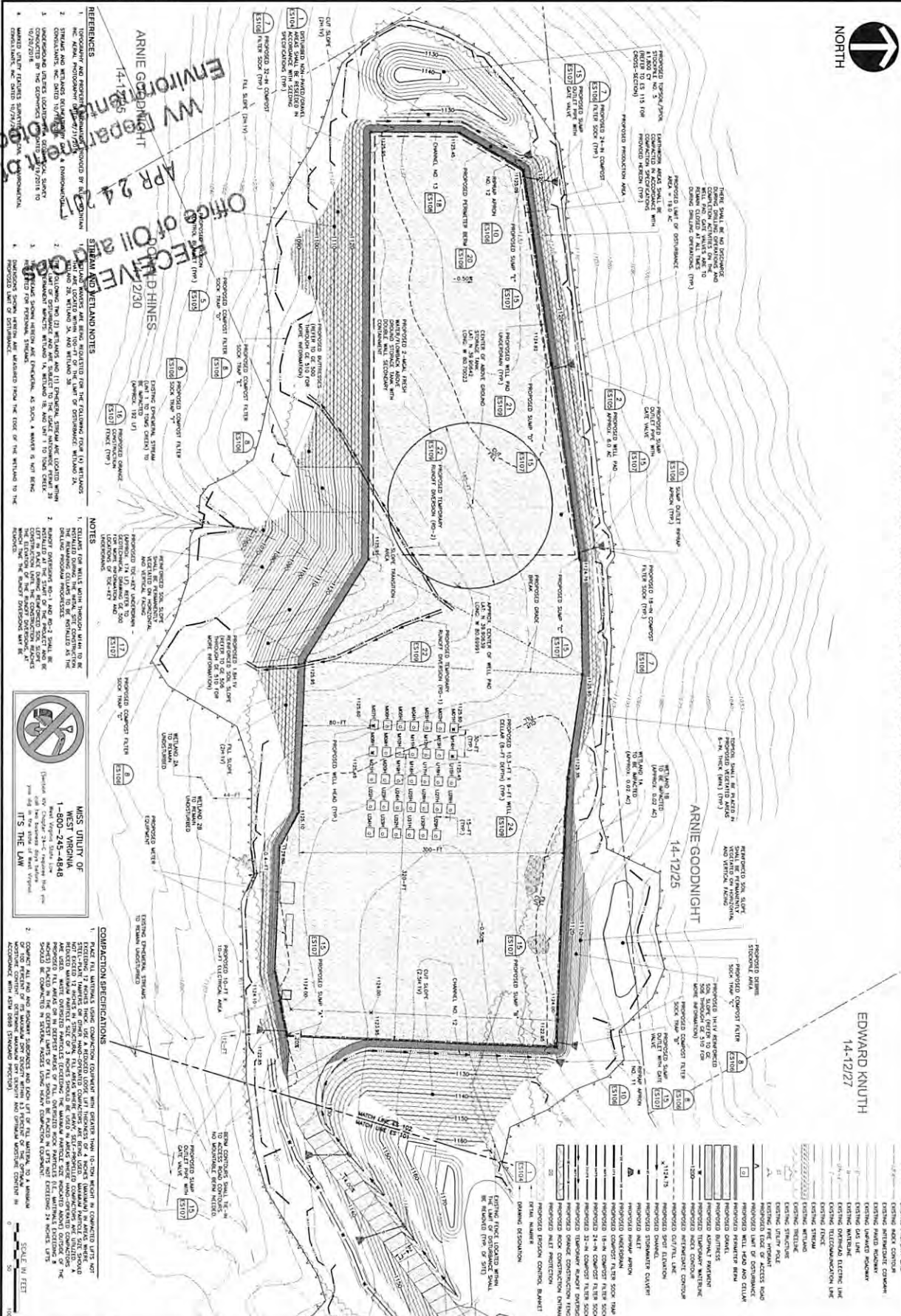
Civil & Environmental Consultants, Inc.

4000 Triangle Lane, Suite 208 - Export, PA 15622
 724-327-5200 800-899-8999

08/18/2017



FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY



RECEIVED
 Office of Oil and Gas
 WV Department of Environmental Protection
 ARNIE GOODNIGHT
 APR 24 2017

REFERENCES
 1. HANDBOOK OF EROSION CONTROL MEASURES FOR THE CONSTRUCTION INDUSTRY, 2ND EDITION, NATIONAL EROSION CONTROL PREVENTION CENTER, 2001.
 2. CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP) MANUAL, 3RD EDITION, NATIONAL EROSION CONTROL PREVENTION CENTER, 2007.
 3. UNDERGROUND UTILITIES LOCATION AND DEPTH SURVEY REPORT, 1/10/2017 BY THE COMPANY.
 4. UNDERGROUND UTILITIES LOCATION AND DEPTH SURVEY REPORT, 1/10/2017 BY THE COMPANY.
 5. UNDERGROUND UTILITIES LOCATION AND DEPTH SURVEY REPORT, 1/10/2017 BY THE COMPANY.

STIPES AND WETLAND NOTES
 1. STIPES AND WETLANDS ARE BEING MAINTAINED FOR THE FOLLOWING REASONS (A) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS AND (B) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS.
 2. WETLANDS ARE BEING MAINTAINED FOR THE FOLLOWING REASONS (A) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS AND (B) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS.
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 4. WETLANDS ARE BEING MAINTAINED FOR THE FOLLOWING REASONS (A) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS AND (B) WETLANDS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS.

NOTES
 1. CALLOUTS FOR WELLS WITH THEORETICAL HEAD TO BE MAINTAINED SHALL BE REFINISHED AS THE DESIGN PROCEEDS.
 2. WELLS ARE BEING MAINTAINED FOR THE FOLLOWING REASONS (A) WELLS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS AND (B) WELLS ARE BEING MAINTAINED FOR THE PROPOSED WETLANDS.
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MISS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 (Standard Utility Code - Revised 10/16/15)
 IT'S THE LAW

COMPACTION SPECIFICATIONS
 1. PLACE ALL WELLS UNDER CONSTRUCTION WITH EXCEPT FROM 12-24 INCHES IN COMPACTED LITS, NOT EXCEEDING 10 INCHES PER LIT, TO BE COMPACTED TO 95% RELATIVE DENSITY USING A STANDARD ROLLER. ALL OTHER AREAS SHALL BE COMPACTED TO 95% RELATIVE DENSITY USING A STANDARD ROLLER. ALL OTHER AREAS SHALL BE COMPACTED TO 95% RELATIVE DENSITY USING A STANDARD ROLLER.
 2. CONDUCT ALL SOIL TESTS AND RECORDS AND SHOW LIT OF ALL WELLS TO A MINIMUM OF 10% PERCENT OF THE TOTAL PERCENT WITHIN 12 INCHES OF THE GROUND SURFACE IN ACCORDANCE WITH ASTM D698 (SHOULDER METHOD).

<p>ES 102</p>	<p>Checked by: Prepared by: Date:</p>	<p>REVISION RECORD</p> <table border="1"> <tr> <th>Date</th> <th>Description</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		Date	Description																									<p>Scale: 1/4" = 10' FEET</p>
		Date	Description																											
<p>HINES WELL SITE WASHINGTON DISTRICT MARSHALL COUNTY, WEST VIRGINIA PREPARED FOR CHEVRON APPALACHIA, LLC 800 MOUNTAIN VIEW DRIVE SMITHFIELD, PA 15478</p>																														

CEC
 Civil & Environmental Consultants, Inc.
 4000 Triangle Lane, Suite 200 - Export, PA 15332
 724-327-5200 800-446-8620
www.cecinc.com

08/18/2017

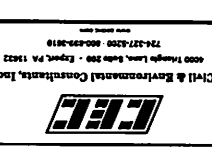


Table with 4 columns: Date, Description, and two other columns for revision tracking.

REMOVE THE PROJECT

1. FINISH OF CONSTRUCTION - CONSTRUCTION PROJECTS SHALL BE FINISHED IN ORDER TO PREVENT THE TEMPORARY...
2. THE CONSTRUCTION PROJECTS SHALL BE FINISHED IN ORDER TO PREVENT THE TEMPORARY...
3. THE CONSTRUCTION PROJECTS SHALL BE FINISHED IN ORDER TO PREVENT THE TEMPORARY...
4. THE CONSTRUCTION PROJECTS SHALL BE FINISHED IN ORDER TO PREVENT THE TEMPORARY...

PROJECT DESCRIPTION

THE PROPOSED PROJECT CONSISTS OF CONSTRUCTING AN APPROXIMATELY 500' DIAMETER GRAVEL WELL AND AN APPROXIMATELY 30' DIAMETER...
PURPOSES. THE WELL WILL BE ACCESSIBLE BY A PERMANENT DRIVEWAY APPROXIMATELY 20' WIDE AND 24" FEET HIGH...
UNDERGROUND CEMENT, REINFORCED CONCRETE, AND TYPICAL STRUCTURES ARE APPROXIMATELY 10' FROM THE SITE...
THE LAND COVER AT THE SITE IS GENERALLY CONSISTS OF GRASSY WOODS, EXISTING SHELTERS AND IMPROVED FENCE STRUCTURES...
THE SITE IS LOCATED IN AN AREA WHERE THERE IS A HIGH RISK OF EROSION AND THE WELL WILL BE 10' FROM THE EDGE OF THE SITE...
FROM THE SITE TO THE NEAREST ROAD OR OTHER STRUCTURE.

REGULATIONS

- 1. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF...
2. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF...
3. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF...
4. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF...

PERMIT CONDITIONS (EXEMPT)

1. FROM SURFACE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SURFACE WATER RUNOFF...
2. APPROACH ROADS SHALL BE KEPT CLEAR. APPROACH ROADS SHALL BE KEPT CLEAR TO FACILITATE TO CROSS...
3. APPROACH ROADS SHALL BE KEPT CLEAR. APPROACH ROADS SHALL BE KEPT CLEAR TO FACILITATE TO CROSS...
4. APPROACH ROADS SHALL BE KEPT CLEAR. APPROACH ROADS SHALL BE KEPT CLEAR TO FACILITATE TO CROSS...

CONSTRUCTION REQUIREMENTS

1. FOUNDATION SHALL BE CONCRETE ON GRAVEL. FOUNDATION SHALL BE CONCRETE ON GRAVEL. FOUNDATION SHALL BE CONCRETE ON GRAVEL...
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CONSTRUCTION SEQUENCES

- 1. LIFT THE EXCAVATION TO THE DEPTH OF THE WELL THAT CAN BE INSTALLED IN ONE (1) DAY...
2. PLACE EXCAVATED MATERIAL UP-SLOPE OF THE TRENCH...
3. BACKFILL AND FINISH TERRACE AT THE END OF EACH WORK DAY. STABILIZE WITH BERMABLE MATERIAL...
4. MAINTAIN TYPICAL GRAVEL SURFACE ON SITE TO PREVENT EROSION AS MUCH AS POSSIBLE...
5. AT A GRADE LESS THAN 1 PERCENT. ONCE THE BIAS IS ONE (1) PERCENT, PLACE EXCAVATED...



REVISION RECORD

No.	Date	Description
1		
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DETAILS (2 of 7)
 PROJECT NUMBER: 160017 DOWD
 DRAWING NUMBER: 03020011
 DATE ISSUED: JAN
 CHECKED BY: JMM
 PROJECT MANAGER: JMM
 ES 104
 HINES WELL SITE
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA
 CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

PERMANENT SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:

SOIL TYPE	PERMANENT SEEDING RATE (TONS PER ACRE)
10.1841 FACE	10.1841 FACE
28.1334 FACE	28.1334 FACE
30.1587 FACE OF	30.1587 FACE OF
30.1587 FACE OF	30.1587 FACE OF
16.1614 FACE	16.1614 FACE
16.1614 FACE	16.1614 FACE

TEMPORARY SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:

SOIL TYPE	TEMPORARY SEEDING RATE (TONS PER ACRE)
10.1841 FACE	10.1841 FACE
28.1334 FACE	28.1334 FACE
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16.1614 FACE	16.1614 FACE

GENERAL NOTES:

- SEEDS SHALL BE APPLIED TO THE BEST PRACTICES DEPARTMENT OF AGRICULTURE'S RECOMMENDATIONS FOR THE SPECIFIC VEGETATION AND SOIL TYPE.
- SEEDS SHALL BE APPLIED AT A RATE OF 1.0 TON PER ACRE AT A DEPTH OF 3 INCHES.
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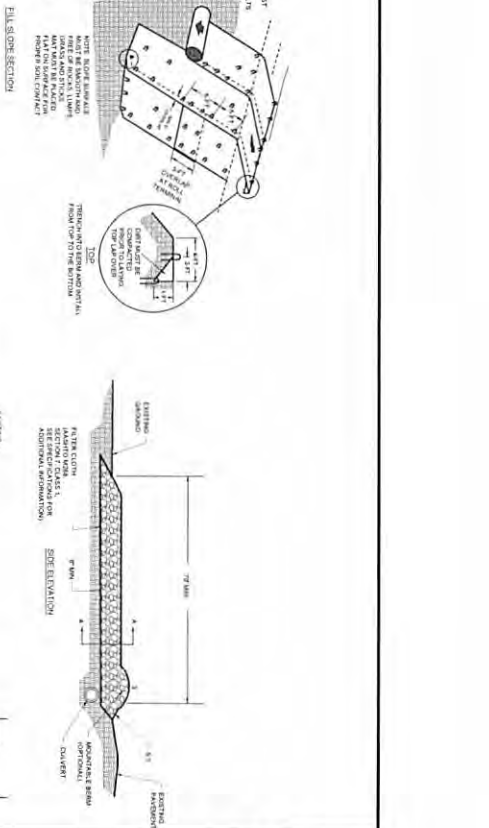
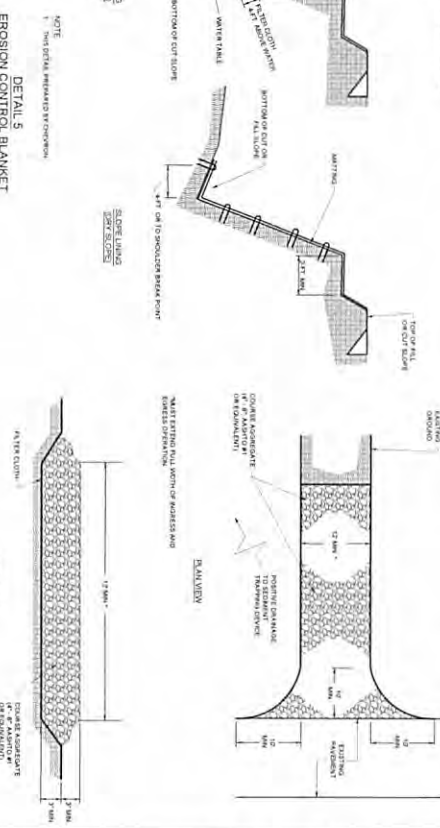
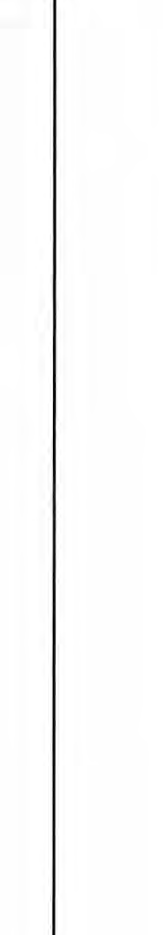
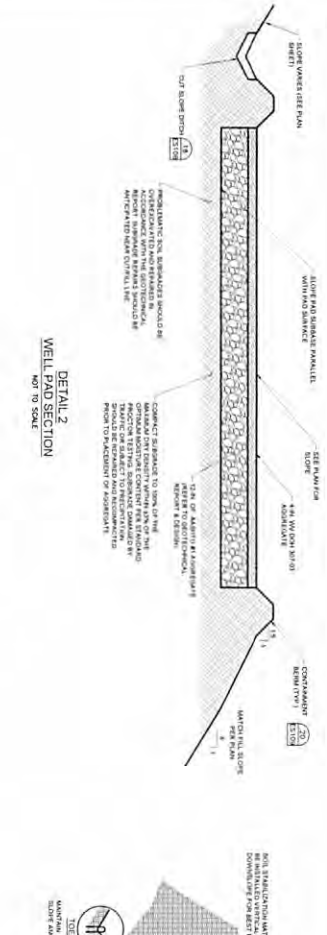
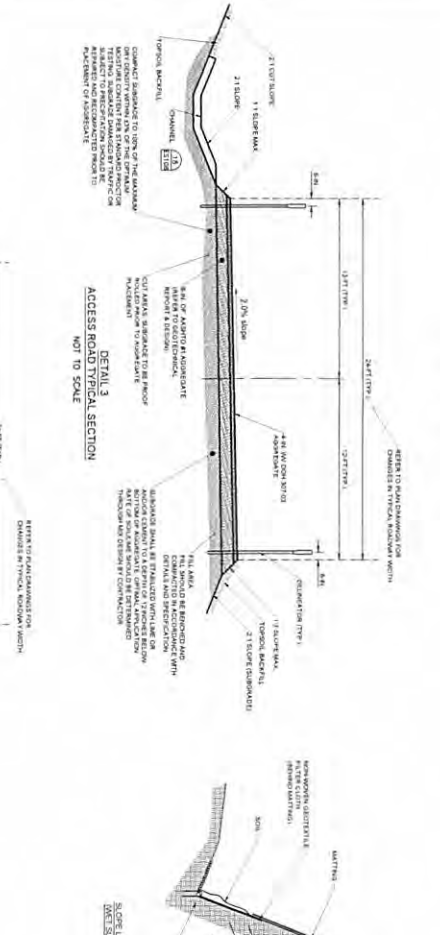
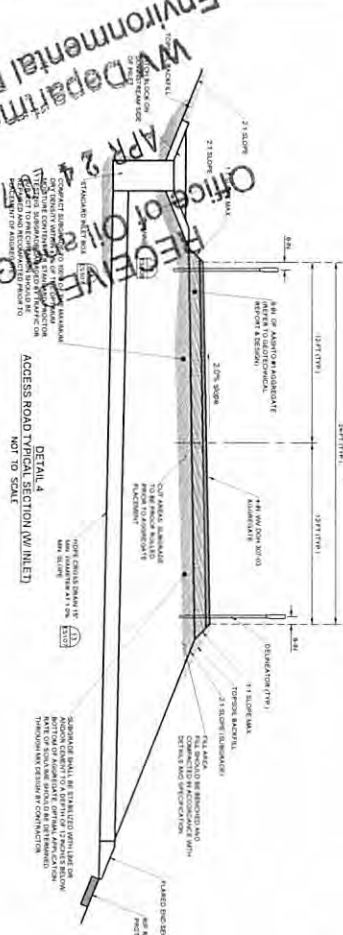
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ITEM NO.	DESCRIPTION	PERMANENT SEEDING RATE (TONS PER ACRE)	TEMPORARY SEEDING RATE (TONS PER ACRE)	APPLICABLE TO (FEET)	PERCENTAGE	PROPORTION BY WEIGHT	PERCENTAGE	PROPORTION BY WEIGHT
1	SEEDS SHALL BE APPLIED TO THE BEST PRACTICES DEPARTMENT OF AGRICULTURE'S RECOMMENDATIONS FOR THE SPECIFIC VEGETATION AND SOIL TYPE.							
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 Office of Oil and Gas
 APR 24 2017
 WV Department of
 Environmental Protection

Environmental Protection
W.V. Department of
Office of Oil and Gas
APR 24 2017
RECEIVED



DETAIL 1
ACCESS ROAD (W/INLET)
NOT TO SCALE

DETAIL 2
WELL PAD SECTION (W/INLET)
NOT TO SCALE

DETAIL 3
ACCESS ROAD TYPICAL SECTION
NOT TO SCALE

DETAIL 4
WELL PAD SECTION (W/INLET)
NOT TO SCALE

DETAIL 5
EROSION CONTROL BLANKET
NOT TO SCALE

DETAIL 6
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

DETAIL 7
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

DETAIL 8
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

DETAIL 9
ROCK CONSTRUCTION ENTRANCE
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DETAIL 20
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DETAIL 21
ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE

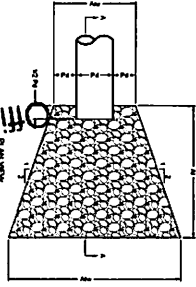
REVISION RECORD

Date	Revision	Description

CEC Civil & Environmental Consultants, Inc.
4000 Triangle Lane, Suite 200 - Export, PA 15332
724-327-5200 800-848-1532
www.cecinc.com

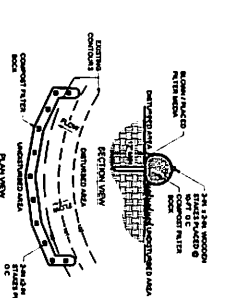
08/18/2017

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 Office of Air and Gas
 Apr 24 2018
 WV Department of Environmental Protection



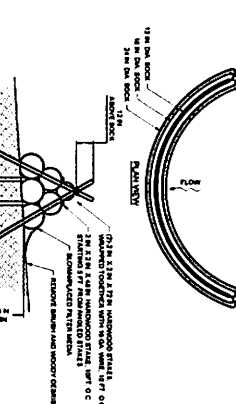
**DETAIL 7
COMPOST FILTER SOCK**
NOT TO SCALE

1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...



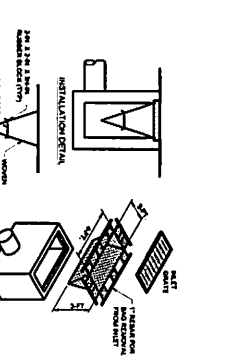
**DETAIL 8
COMPOST FILTER SOCK SEDIMENT TRAP**
NOT TO SCALE

1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...



**DETAIL 9
FILTER BAG INLET PROTECTION**
NOT TO SCALE

1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...

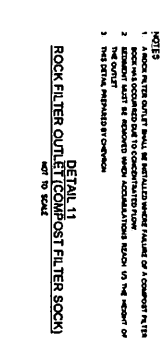


**DETAIL 10
PUMPED WATER FILTER BAG**
NOT TO SCALE

1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...

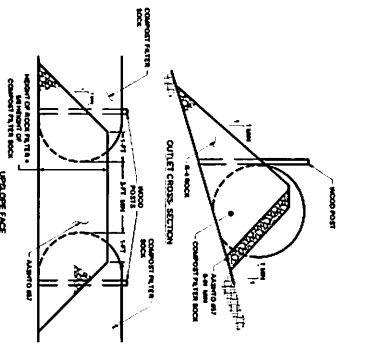
Item No.	Description	Quantity	Unit	Notes
1	COMPOST FILTER SOCK	1	EA	
2	ROCK	1	CU YD	
3	OUTLET DUCTWORK	1	EA	
4	COMPOST FILTER SOCK	1	EA	
5	ROCK	1	CU YD	
6	OUTLET DUCTWORK	1	EA	
7	COMPOST FILTER SOCK	1	EA	
8	ROCK	1	CU YD	
9	OUTLET DUCTWORK	1	EA	
10	COMPOST FILTER SOCK	1	EA	
11	ROCK	1	CU YD	
12	OUTLET DUCTWORK	1	EA	
13	COMPOST FILTER SOCK	1	EA	
14	ROCK	1	CU YD	
15	OUTLET DUCTWORK	1	EA	
16	COMPOST FILTER SOCK	1	EA	
17	ROCK	1	CU YD	
18	OUTLET DUCTWORK	1	EA	
19	COMPOST FILTER SOCK	1	EA	
20	ROCK	1	CU YD	
21	OUTLET DUCTWORK	1	EA	
22	COMPOST FILTER SOCK	1	EA	
23	ROCK	1	CU YD	
24	OUTLET DUCTWORK	1	EA	
25	COMPOST FILTER SOCK	1	EA	
26	ROCK	1	CU YD	
27	OUTLET DUCTWORK	1	EA	
28	COMPOST FILTER SOCK	1	EA	
29	ROCK	1	CU YD	
30	OUTLET DUCTWORK	1	EA	

**DETAIL 10
PUMPED WATER FILTER BAG**
NOT TO SCALE



**DETAIL 11
ROCK FILTER OUTLET (COMPOST FILTER SOCK)**
NOT TO SCALE

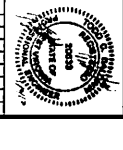
1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...



**DETAIL 12
PLUMPED WATER FILTER BAG**
NOT TO SCALE

1. The filter sock shall be placed in the outlet ductwork...
2. The filter sock shall be made of 1/2 inch mesh...
3. The filter sock shall be made of 1/2 inch mesh...
4. The filter sock shall be made of 1/2 inch mesh...
5. The filter sock shall be made of 1/2 inch mesh...
6. The filter sock shall be made of 1/2 inch mesh...
7. The filter sock shall be made of 1/2 inch mesh...

Date	Revision	Description
08/18/2017	1	ISSUED FOR PERMIT
08/18/2017	2	REVISED PER PERMIT COMMENTS
08/18/2017	3	REVISED PER PERMIT COMMENTS
08/18/2017	4	REVISED PER PERMIT COMMENTS
08/18/2017	5	REVISED PER PERMIT COMMENTS
08/18/2017	6	REVISED PER PERMIT COMMENTS
08/18/2017	7	REVISED PER PERMIT COMMENTS
08/18/2017	8	REVISED PER PERMIT COMMENTS
08/18/2017	9	REVISED PER PERMIT COMMENTS
08/18/2017	10	REVISED PER PERMIT COMMENTS
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08/18/2017	27	REVISED PER PERMIT COMMENTS
08/18/2017	28	REVISED PER PERMIT COMMENTS
08/18/2017	29	REVISED PER PERMIT COMMENTS
08/18/2017	30	REVISED PER PERMIT COMMENTS



CEC
 Civil & Environmental Consultants, Inc.
 4000 Triangle Lane, Suite 200 - Export, PA 15632
 724-277-6300 800-677-7111
 www.cecinc.com

08/18/2017

HINES WELL SITE
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA
 PREPARED FOR:
CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

Project Name: HINES WELL SITE
 Date: 08/18/2017
 Drawn By: [Name]
 Checked By: [Name]
 Project Number: ES-106

Civil & Environmental Consultants, Inc.
4000 Trappe Lane, Suite 200 - Export, PA 15622
724-277-4200 - 800-498-2610

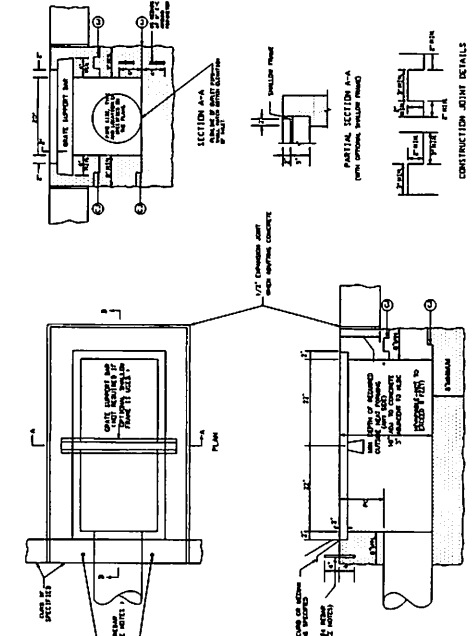


REVISION RECORD	

HINES WELL SITE
MARSHALL COUNTY, WEST VIRGINIA
PREPARED FOR
CHEVRON APPALACHIA, LLC
900 MOUNTAIN VIEW DRIVE
SMITHFIELD, PA 15478
DETAILS (5 OF 8)

Project Number: 16-022 (04D)
Drawing Code: H.F.S.
Sheet Number: 040477(1)
Revision No. 000
Client Number: 000
Project Manager: M.C.

NOTES
1. ALL MATERIALS TO BE INSTALLED SHALL BE APPROVED BY THE ENGINEER IN CHARGE PRIOR TO CONSTRUCTION.
2. THE MINIMUM TRENCH WIDTHS SHALL BE AS SHOWN IN TABLE 1.
3. ALL TRENCHES SHALL BE BACKFILLED WITH TYPE 1.5 CRUSHED GRANULAR MATERIAL (G.M.) TO THE ORIGINAL FINISH GRADE.
4. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.
5. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.
6. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.
7. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.



STANDARD SHEET 28A-C
TYPE C INLET
SEE REVISION RECORD

TABLE 1. MINIMUM TRENCH WIDTHS

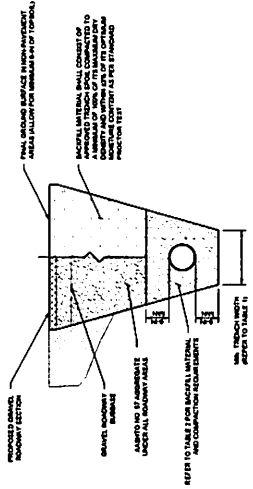
PIPE DIAMETER (in.)	TRENCH WIDTH (in.)
18	24
24	30
30	36
36	42
42	48
48	54
54	60
60	66
66	72
72	78
78	84
84	90

TABLE 2. BACKFILL MATERIAL AND COMPACTION REQUIREMENTS

DESCRIPTION	SIZE CLASSIFICATION	COMPACTION REQUIREMENTS		MIN. RELATIVE DENSITY (%)
		CLASS 1	CLASS 2	
TYPE 1.5 CRUSHED GRANULAR MATERIAL (G.M.)	CLASS 1	90%	90%	98%
	CLASS 2	90%	90%	98%
	CLASS 3	90%	90%	98%
TYPE 3 CRUSHED GRANULAR MATERIAL (G.M.)	CLASS 1	90%	90%	98%
	CLASS 2	90%	90%	98%

TABLE 3. DRAINAGE CONDUIT (in.)

Conduit No.	Conduit Dia. (in.)	Conduit Length (ft)	Conduit Dia. (in.)	Approx. Min. Road Cover (ft)
1	18	15	18	2.75
2	24	15	24	2.75
3	30	15	30	2.75
4	36	15	36	2.75
5	42	15	42	2.75
6	48	15	48	2.75
7	54	15	54	2.75



NOTES:
1. ALL MATERIALS EXCAVATED DURING TRENCHING SHALL BE STOCKPILED AT A SEPARATE OFF-SITE LOCATION FROM ALL TRENCHES TO PREVENT RAIN OR WATER FROM ENTERING THE TRENCHES.
2. ALL TRENCHES SHALL BE APPROVED BY THE ENGINEER IN CHARGE PRIOR TO CONSTRUCTION.
3. THE MINIMUM TRENCH WIDTHS SHALL BE AS SHOWN IN TABLE 1.
4. ALL TRENCHES SHALL BE BACKFILLED WITH TYPE 1.5 CRUSHED GRANULAR MATERIAL (G.M.) TO THE ORIGINAL FINISH GRADE.
5. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.
6. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.
7. ALL TRENCHES SHALL BE PROTECTED BY SAFETY BARNS, SAFETY FENCES, AND SAFETY LIGHTS THROUGHOUT CONSTRUCTION.

TABLE 4. INLET PROFILES

ITEM NO.	CONDUIT DIA. (in.)	INLET DIA. (in.)	INLET DIA. (in.)
1	18	18	18
2	24	24	24
3	30	30	30
4	36	36	36
5	42	42	42
6	48	48	48
7	54	54	54



DETAIL 14
WOODTYPE C INLET
SEE REVISION RECORD



DETAIL 13
CROSS DRAIN CULVERT
SEE REVISION RECORD



DETAIL 15
PAD SUMP
SEE REVISION RECORD

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REVISION RECORD

NO.	DATE	DESCRIPTION
01		
02		
03		
04		
05		
06		
07		
08		

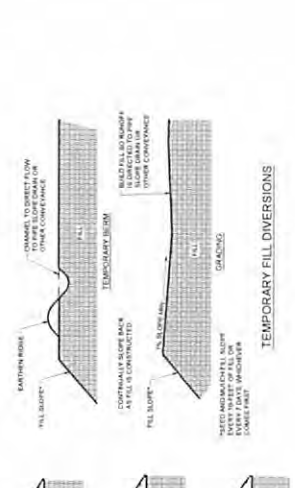
HINES WELL SITE
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA
 PREPARED FOR
CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

DETAILS (6 OF 7)
 Project Number: 16-020-0400
 Drawing Scale: 1" = 8'-0"
 Issue Number: 0225171127
 Drawing Date: 09/15/2016
 Drawn By: TCB
 Checked By: TCB
 Project Manager: MJS

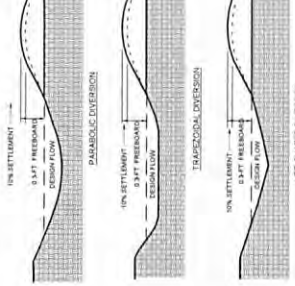
ES 108



TEMPORARY FILL DIVERSIONS

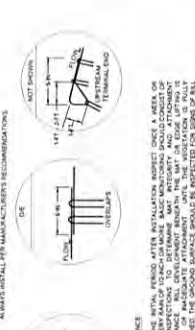


TEMPORARY FILL DIVERSIONS



DIVERSIONS

MAINTENANCE
 THESE CONTROL STRUCTURE CHANNELS ONLY
 ALWAYS INSTALL PER MANUFACTURER'S RECOMMENDATIONS



CHANNEL SUMMARY
 Channel Length (ft), Min. Slope (%), Max. Number, No. Weirs (ft), No. Venti (ft), No. Venti (ft), Depth (ft), Linings

Channel	Length (ft)	Min. Slope (%)	Max. Number	No. Weirs (ft)	No. Venti (ft)	No. Venti (ft)	Depth (ft)	Linings
1	122	3.0	8.5	2	8	1.5	2	NAG P300
2	181	3.0	9.5	2	8	1.5	2	NAG P300
3	160	7.0	7.0	2	8	1.5	2	NAG P300
4	160	7.0	7.0	2	8	1.5	2	NAG P300
5	144	7.0	14.0	2	8	1.5	2	NAG P300
6	100	14.0	14.0	2	8	1.5	2	NAG P300
7	158	14.0	14.0	2	8	1.5	2	NAG P300
8	158	14.0	14.0	2	8	1.5	2	NAG P300
9	127	14.0	14.0	2	8	1.5	2	NAG P300
10	100	14.0	14.0	2	8	1.5	2	NAG P300
11	100	14.0	14.0	2	8	1.5	2	NAG P300
12	100	14.0	14.0	2	8	1.5	2	NAG P300
13	177	0.5	0.5	2	8	1.5	2	NAG P300

NOTES
 1. SHOT REPAIRS FOR ALL PRECAST HEADWALLS/ENDWALLS
 2. ALL CONCRETE END SECTIONS MUST BE SUBMITTED FOR APPROVAL
 3. ALL DETAILS SHOWN IN THIS PLAN



DETAIL 19
HEADWALL/ENDWALL
NOT TO SCALE

NOTE
 THIS DETAIL PREPARED BY CONTRACTOR



DETAIL 18
VEGETATED CHANNEL
NOT TO SCALE

ROLLED EROSION CONTROL PRODUCTS
 CHANNEL INSTALLATION
 CROSS SECTION
 TEMPORARY DIVERSION

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ATTACHMENT D
USACE NATIONWIDE PERMIT 39 APPLICATION

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APR 24 2017
WV Department of
Environmental Protection

08/18/2017

**U.S. ARMY CORPS OF ENGINEERS
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
33 CFR 325. The proponent agency is CECW-CO-R.**

Form Approved -
OMB No. 0710-0003
Expires: 30-SEPTEMBER-2015

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Jenny Middle - Last - Hayes Company - Chevron Appalachia, LLC E-mail Address - jhayes@chevron.com			8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Katie Middle - L Last - Moberg Company - Civil & Environmental Consultants, Inc. E-mail Address - kmoberg@cecinc.com		
6. APPLICANT'S ADDRESS: Address- 800 Mountain View Drive City - Smithfield State - PA Zip - 15478 Country - US			9. AGENT'S ADDRESS: Address- 4000 Triangle Lane, Suite 200 City - Export State - PA Zip - 15632 Country - US		
7. APPLICANT'S PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax 724-564-3781 724-564-3894			10. AGENTS PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax 724-327-5200 724-327-5280		

STATEMENT OF AUTHORIZATION

11. I hereby authorize, CEC, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

Jenny Hayes
SIGNATURE OF APPLICANT

1.24.17
DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Hines Well Pad		14. PROJECT TITLE, ADDRESS (if applicable) Address - Campbell Hill Road City - Moundsville State - WV Zip - 26041	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Refer to Waters Impact Summary Table in Attachment D		15. LOCATION OF PROJECT Latitude: •N 39.906145 Longitude: •W -80.697938	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Washington District			

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APR 24 2017
WV Department of
Environmental Protection
Barra Marshall County

17. DIRECTIONS TO THE SITE

From I-470 W, take Exit 2 toward Bethlehem Drive 0.2 mile, and turn left onto Co Hwy 91/1. Drive 0.4 mile, and continue onto 29th St Blvd/W Bethlehem Blvd. Drive 2.2 miles, turn left onto State Rte 2 Alt, and turn left again onto Roberts Ridge Road. Drive 0.1 mile, and turn right onto WV-88 S/Ridgecrest Road. Drive 8.2 miles and turn left onto US-250 S. Drive 2 miles, and turn right onto Campbell Hill Road/Waymans Ridge Road. Drive 2.2 miles, and turn slight right onto Campbell Hill Road. Drive 0.2 mile, and the entrance to the site will be on the right.

18. Nature of Activity (Description of project, include all features)

Chevron Appalachia, LLC is proposing to construct a new natural gas well pad and associated access road. The proposed limit of disturbance is approximately 19 acres and includes an active cattle pasture and wooded hillslopes. The construction of the well pad will require permanent impacts to 0.026 acre of palustrine emergent (PEM) wetlands and 192 linear feet of an ephemeral stream.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the project is to construct a natural gas well pad and access road.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The construction of the facility will require the placement of fill material into one unnamed tributary (UNT) to Toms Run and one PEM wetland. A second PEM wetland will be excavated. These permanent impacts are associated with grading activities for construction of the well pad.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount In Cubic Yards	Type Amount In Cubic Yards	Type Amount In Cubic Yards
30 CY of earthen material into wetlands	500 CY of earthen material into streams	N/A

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.026 acre of PEM wetlands
or
Linear Feet 192 linear feet of stream

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Chevron analyzed numerous on-site configurations for the siting of the facility, and the proposed site plan represents the layout which minimizes impacts to the furthest extent practicable while still meeting the project's purpose and need. Grading was minimized along the southern side of the well pad to limit the impact to UNT 1 to Toms Run and to avoid impacts to Wetlands 2A and 2B. Compost filter sock traps and orange construction fencing will be installed around the downstream portion of the impacted stream to avoid additional impacts.

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APR 24 2017

APR 24 2017
WV Department of Environmental Protection
Office of Oil and Gas

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

a. Address- Hines Donald ET UX - 301 4TH Street

City - Glen Dale State - West Virginia Zip - 26038

b. Address- Gossett Lance J ET UX - RD 1 BOX 428 A

City - Moundsville State - West Virginia Zip - 26041

c. Address- Goodnight Amie N ET UX - RD 1 BOX 437

City - Moundsville State - West Virginia Zip - 26041

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
WVDNR OLS	Right of Entry	Not yet assigned	January 2017	Pending	
WVDEP	Special Condition A	Not yet assigned	January 2017	Pending	
WVDEP	Horizontal 6A Well P	Not yet assigned	January 2017	Pending	
WVDEP	Wetland Waiver	Not yet assigned	January 2017	Pending	

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Jenny Hayes
SIGNATURE OF APPLICANT

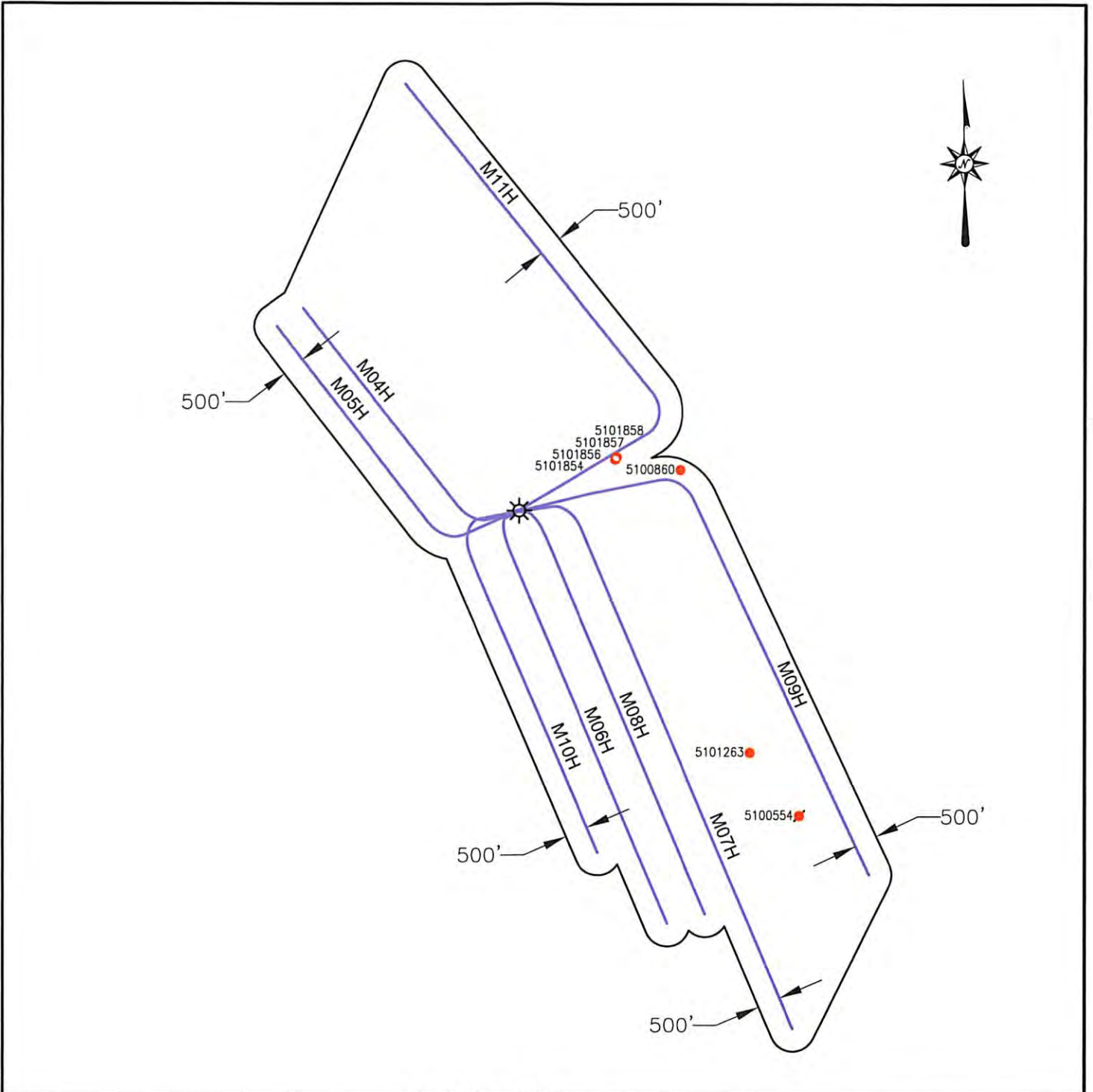
1-24-17
DATE

Katie Moberg
SIGNATURE OF AGENT

1-24-17
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



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

PREPARED FOR:
 CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

LEGEND

- WELL LOCATION
- ACTIVE WELL
- PLUGGED WELL
- PERMITTED WELL

HINES
 AREA OF REVIEW MAP
 MARSHALL COUNTY
 WASHINGTON DISTRICT
 WEST VIRGINIA

TOPO QUAD: MOUNDSVILLE, WV
 SCALE: 1" = 3000'
 DATE: MARCH 2, 2017

08/18/2017

4705101928

WW-6B
(04/15)

API NO. 47- _____ - _____
OPERATOR WELL NO. Hines M06H
Well Pad Name: Hines

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 Washington Moundsville, WV
Operator ID County District Quadrangle

2) Operator's Well Number: Hines M06H Well Pad Name: Hines

3) Farm Name/Surface Owner: Donald Hines and Wanda L. Hines Public Road Access: Route 38/Campbell Hill Road

4) Elevation, current ground: 1125' Elevation, proposed post-construction: 1125'

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

Other _____

(b) If Gas Shallow Deep _____

Horizontal

6) Existing Pad: Yes or No No

JN 3/26/17

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6260' GL, 50' and 0.64 psi/ft

8) Proposed Total Vertical Depth: 6260

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15626

11) Proposed Horizontal Leg Length: 9026

12) Approximate Fresh Water Strata Depths: 360' GL

13) Method to Determine Fresh Water Depths: 1.5 mi radius offset wells, freshwater wells, and freshwater base level

14) Approximate Saltwater Depths: 840', 1620', and 1961' GL

15) Approximate Coal Seam Depths: 360' and 635' GL

16) Approximate Depth to Possible Void (coal mine, karst, other): NA - solid coal anticipated

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

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

Depth: 635' GL

Seam: Pittsburgh Coal

Owner: Murray Energy Corporation

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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20	New			60	60	CTS
Fresh Water	13.375	New	J-55	54.5	410	410	CTS
Coal							
Intermediate	9.625	New	L-80	40	1,858	1,858	CTS
Production	5.50	New	P110	20	15,626	15,626	2,358
Tubing							
Liners							

JW 3/26/17

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20	26					
Fresh Water	13.375	17.5	0.38	2730	1911	Class A	1.2
Coal							
Intermediate	9.625	12.375 & 12.25	0.395	5750	2768	Class A	1.19
Production	5.5	8.75 & 8.5	0.361	14360	9975	Class A, G, or H	1.25
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WW-6B
(10/14)

API NO. 47- _____ - _____
OPERATOR WELL NO. Hines M06H
Well Pad Name: Hines

JW 3/26/17

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 6,260 feet. Drill horizontal leg.

47 05 10 10 7 0

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

18,762 bbl fluid - 1,000,000 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): 19.0

22) Area to be disturbed for well pad only, less access road (acres): 10.3

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, 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.

Hines Pad Area of Review

Well ID	Prior Operator On Record	Operator - DEP	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones NOT Perforated
47-051-00860	CNX Gas Company LLC	CNX Gas Company LLC	Active	39.908767	-80.686817	840'	Pittsburgh Seam	None
47-051-01263	Chevron Appalachia, LLC	Chevron Appalachia, LLC	Active	39.892007	-80.681121	Unknown	Unknown	None
47-051-00554	Kentucky Central & Co.	Unknown	Plugged	39.888303	-80.677210	1441'	Pottsville	None
47-051-01854	Chevron Appalachia, LLC	Chevron Appalachia, LLC	Permitted	39.909336	-80.691893	6317'	Marcellus	None
47-051-01856	Chevron Appalachia, LLC	Chevron Appalachia, LLC	Permitted	39.909383	-80.691856	6317'	Marcellus	None
47-051-01857	Chevron Appalachia, LLC	Chevron Appalachia, LLC	Permitted	39.909430	-80.691819	6317'	Marcellus	None
47-051-01858	Chevron Appalachia, LLC	Chevron Appalachia, LLC	Permitted	39.909477	-80.691782	6317'	Marcellus	None

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HINES PAD CEMENT ADDITIVES

- For the Water String the blend will contain class A cement, 3% CaCl₂, and flake.
- The intermediate will contain class A cement, 3% CaCl₂, 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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Hines M06H

Ground Level Elev. (ft above SL): 1,120

Washington Twp, Marshall Co, WV

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			
Core Barrel / Auger	2 Bowspring per Jt	20" Conductor	60	60			26	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	410	410			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 jts over coupling	9-5/8" Casing	1,858	1,858			12.375 - 12.25	Intermediate Casing 9-5/8" 40# L-60 BTC 0.395" Wall Coupling OD (in) 10.625 ID (in) 8.835 Drift ID (in) 8.679 Burst (psi) 5,750 Collapse (psi) 3,080 Yield (Jt Strength 1,000 lbs) 916	Intermediate II Blend (Class A) Cement to Surface
	Bow Spring: (1) per every other jt over coupling Spiralgilder or Centek: (1) per jt of csg to KOP	5-1/2" Casing	12,877 - 20,778	12,877 - 20,778			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
Non-Conservation	Float Equip.	5-1/2" Casing	12,877 - 20,778	12,877 - 20,778			8.75 - 8.5		

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Production Lead Slurry
TOC minimum 200' above Marcellus

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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) Middle Grave Creek - Grave Creek Quadrangle Moundsville, 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 Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- 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, SBM 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) _____

-Landfill or offsite name/permit number? Arden Landfill #100172, South Hills Landfill #100592, Short Creek Landfill #WV0109517

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 April 1, 2016, 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 Hayes
Company Official (Typed Name) Jenny Hayes
Company Official Title Permitting Team Lead

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Subscribed and sworn before me this 13th day of March, 2017
Kristen Brooks
Notary Public
My commission expires Sept 2, 2018

WV Department of Environmental Protection
COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Kristen Brooks, Notary Public
Smithfield Boro, Fayette County
My Commission Expires Sept. 2, 2018
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Proposed Revegetation Treatment: Acres Disturbed 11.6 acres Prevegetation pH Per soils testing report

Lime 3 Tons/acre or to correct to pH unless otherwise noted in soils report

Fertilizer type 10-20-20

Fertilizer amount 300 lbs/acre

Mulch 3, 5 for winter stabilization Tons/acre

4705101970

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

see attached

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, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Jim Trishola*

Comments: _____

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Title: *Oil + Gas Inspector*

Date: *3/27/17*

Field Reviewed? () Yes () No

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SEED MIXTURES

Temporary		Permanent		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	50	Non Agricultural Upland		Hayfield, Pastureland, and Cropland	
or		Tall Fescue	100	Orchard Grass	80
Winter Wheat	75	Perennial Ryegrass	33	Timothy	80
		Ladino Clover	18	Birdfoot - Trefoil	20
		Birdfoot - Trefoil	18	Ladino Clover	20
		Red Top	6		

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 APR 24 2017



Chevron

**Appalachian LLC
WV Well Site Safety Plan**

Pad: Hines Pad A

JN 3/26/17

Well # M09H

**1256 Campbell Hill Road
Moundsville, WV 26041
Washington District
Marshall County, WV**

Access Point – [39.904947°N, 80.693363°W]

Well Site – [39.906387°N, 80.699914°W]

Marshall County, West Virginia

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BHL is located on topo map 12,711 feet south of Latitude: 39° 55' 00"
 SHL is located on topo map 3,821 feet south of Latitude: 39° 55' 00"

NOTES:

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

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

SURFACE HOLE LOCATION (SHL)

UTM 17-NAD83(M)
 N:4417387.01
 E:525698.81
 NAD83, WV NORTH
 N:514422.074
 E:1632053.982

APPROX. LANDING POINT

UTM 17-NAD83(M)
 N:4417117.50
 E:525648.62
 NAD83, WV NORTH
 N:513540.414
 E:1631874.485

BOTTOM HOLE LOCATION (BHL)

UTM 17-NAD83(M)
 N:4414681.74
 E:526731.48
 NAD83, WV NORTH
 N:505488.076
 E:1635294.286

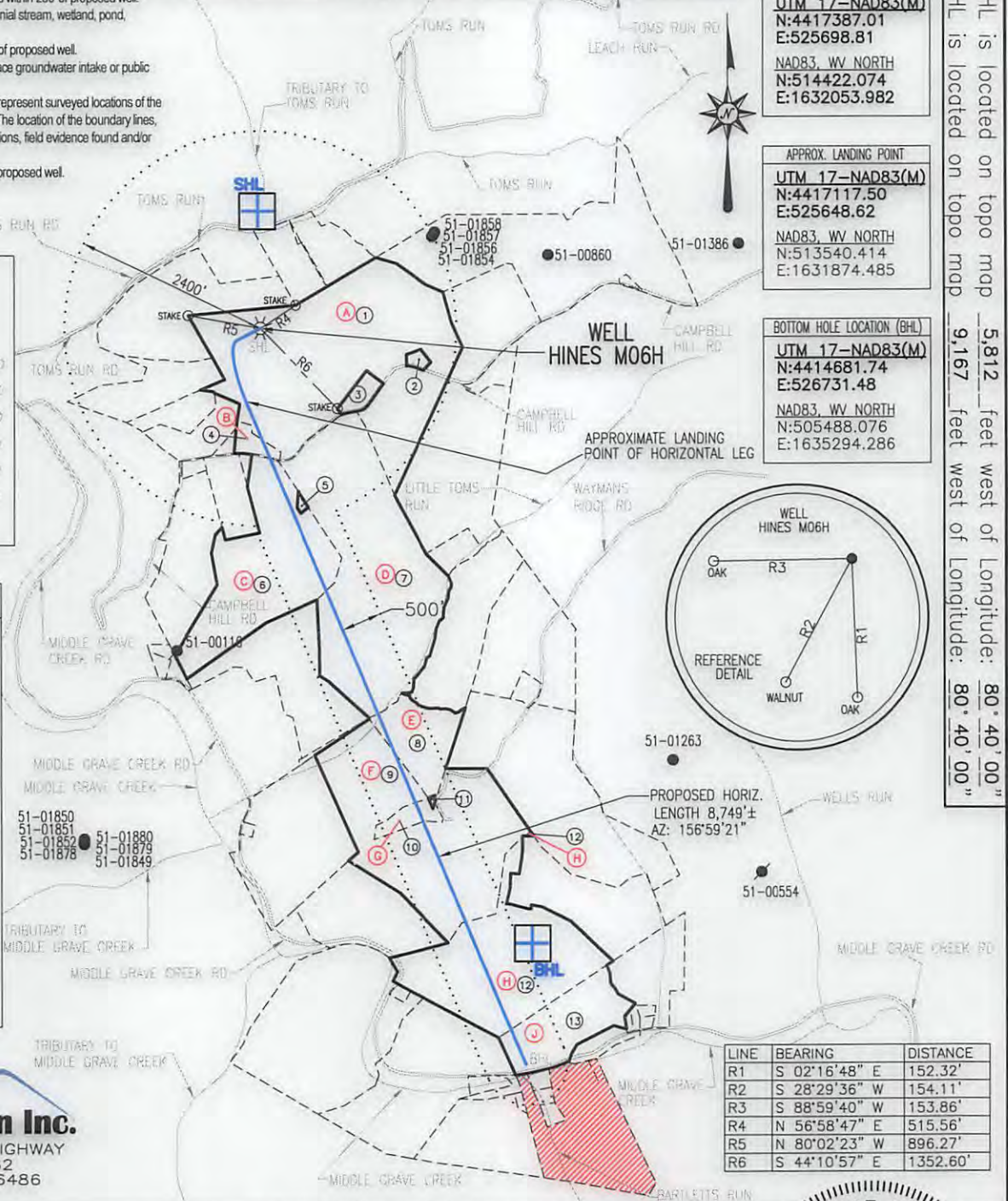
WELL PAD ORIENTATION DETAIL

M01HC	M11HC	U13HC	U23HC
M02HC	M12HC	U14HC	U24HC
M03HC	M13HC	U15HC	U25HC
M04HC	M14HC	U16HC	U26HC
M05HC	M15HC	U17HC	U27HC
M06HC	M16HC	U18HC	U28HC
M07HC	M17HC	U19HC	U29HC
M08HC	M18HC	U20HC	U30HC
M09HC	M19HC	U21HC	U31HC
M10HC	M20HC	U22HC	U32HC
M11HC	M21HC	U23HC	U33HC
M12HC	M22HC	U24HC	U34HC

N.T.S.

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



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

FILE #: HINES M06H
 DRAWING #: HINES M06H
 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: [Signature]
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
 LICENSED
 No. 2000
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 PLACE SEAL HERE

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



DATE: MARCH 7, 2017
 OPERATOR'S WELL #: HINES M06H
 API WELL #: 47 51 01928 MCA
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1125.45'

COUNTY/DISTRICT: MARSHALL / WASHINGTON QUADRANGLE: MOUNDSVILLE, WV 7.5'

SURFACE OWNER: DONALD HINES ET UX ACREAGE: 114.934±

OIL & GAS ROYALTY OWNER: DONALD HINES ET UX ACREAGE: 449.253±

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: 6,400'± TMD: 15,625'±

WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY
 Address 800 MOUNTAIN VIEW DRIVE Address 500 LEE STREET, EAST SUITE 1600
 City SMITHFIELD State PA Zip Code 15478 City CHARLESTON State WV Zip Code 25301-3202

BHL is located on topo map 5,812 feet west of Longitude: 80° 40' 00"
 SHL is located on topo map 9,167 feet west of Longitude: 80° 40' 00"

08/18/2017

HINES M06H PAGE 2 OF 2

	LESSOR	DIST-TM/PAR
A	DONALD HINES ET UX	14-12/30
B	GIBBS DAVIDSON ET UX	14-12/30.4
C	SHANNETTE OMEAR	14-12/33
	SANDRA K. FULLER	
	DOUGLAS L. PARSONS	
	DONALD M. BOSTON ET UX	
	DAVID D. PARSONS ET UX	
	JAMES CRAIG PARSONS	
	ROBERT B. FULLER TEST TRUSTEE	
	GRACE I. SCARBOROUGH	
D	DOUGLAS EDWARD GOULDSBERRY ET UX	14-12/32
E	TODD R. KETTLER ET UX	14-13/3
F	TODD R. KETTLER ET UX	14-13/2
G	KEVIN J. BROWN	14-13/2.1
H	RICHARD F. VARGO ET UX	14-13/21.1
J	ROBERT W. COFFIELD ET UX	14-13/18

	SURFACE OWNER	DIST-TM/PAR
1	DONALD HINES ET UX	14-12/30
2	TERRY L. DERRROW ET UX	14-12/30.3
3	CHEVRON U.S.A. INC.	14-12/30.2
4	CHEVRON U.S.A. INC.	14-12/30.4
5	ROBERT B. FULLER ET UX	14-12/33.1
6	HENRY T. PARSONS EST ET AL	14-12/33
7	DOUGLAS EDWARD GOULDSBERRY ET UX	14-12/32
8	TODD R. & DAWN R. KETTLER	14-13/3
9	TODD & DAWN R. KETTLER	14-13/2
10	TODD R. & DAWN R. KETTLER	14-13/2.1
11	TODD R. & DAWN R. KETTLER	14-13/3.1
12	RICHARD E. & JADE L. VARGO	14-13/21.1
13	R. M. COFFIELD FAMILY TRUST	14-13/18

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M) N:4417387.01 E:525698.81
NAD83, WV NORTH N:514422.074 E:1632053.982

APPROX. LANDING POINT
UTM 17-NAD83(M) N:4417117.50 E:525648.62
NAD83, WV NORTH N:513540.414 E:1631874.485

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M) N:4414681.74 E:526731.48
NAD83, WV NORTH N:505488.076 E:1635294.286

08/18/2017

**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

4705101920

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

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

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

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

Well Operator: Chevron Appalachia, LLC

By: Jenny Hays APR 24 2017
Its: Permitting Team Lead

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Page 1 of 2

08/18/2017

HINES M06H

Plat ID	Lessor	Lessee	Royalty	Book/Page	Assignment #1	Assignment #2	Assignment #3
14-0012-0030-0000-0000	HINES DONALD ET UX	CHEVRON U.S.A. INC.	0.160	774/290	N/A	N/A	N/A
14-0012-0030-0004-0000	DAVIDSON GIBBS ET UX	CHEVRON U.S.A. INC.	0.160	774/283	N/A	N/A	N/A
	OMEAR SHANNETTE	CHEVRON U.S.A. INC.	0.180	837/297	N/A	N/A	N/A
	FULLER SANDRA K	CHEVRON U.S.A. INC.	0.180	837/182	N/A	N/A	N/A
	PARSONS DOUGLAS L	CHEVRON U.S.A. INC.	0.180	837/279	N/A	N/A	N/A
	BOSTON DONALD M ET UX	CHEVRON U.S.A. INC.	0.180	837/287	N/A	N/A	N/A
	PARSONS DAVID D ET UX	CHEVRON U.S.A. INC.	0.180	837/172	N/A	N/A	N/A
	PARSONS JAMES CRAIG	CHEVRON U.S.A. INC.	0.180	837/177	N/A	N/A	N/A
	FULLER ROBERT B TEST TRSTE	CHEVRON U.S.A. INC.	0.180	837/187	N/A	N/A	N/A
	SCARBOROUGH GRACE L	CHEVRON U.S.A. INC.	0.180	864/20	N/A	N/A	N/A
14-0012-0032-0000-0000	GOULDSBERRY DOUGLAS EDWARD ET UX	PROFESSIONAL LAND RESOURCES, LLC	0.150	683/136 & 748/88	PROFESSIONAL LAND RESOURCES, LLC to HANNON & ASSOCIATES, INC. 21/645	HANNON & ASSOCIATES, INC to NPAR, LLC 24/170	NPAR, LLC to CHEVRON U.S.A. INC. 756/332
14-0013-0003-0000-0000	KETTILER TODD R ET UX	CHEVRON U.S.A. INC.	0.180	868/78	N/A	N/A	N/A
14-0013-0002-0000-0000	KETTILER TODD R ET UX	CHEVRON U.S.A. INC.	0.180	868/78	N/A	N/A	N/A
14-0013-0002-0001-0000	BROWN KEVIN J	CHEVRON U.S.A. INC.	0.140	805/277	N/A	N/A	N/A
14-0013-0021-0001-0000	VARGO RICHARD F ET UX	TH EXPLORATION, LLC	0.180	866/315	TH EXPLORATION, LLC to CHEVRON U.S.A. INC. 36/168	N/A	N/A
14-0013-0018-0000-0000	COFFIELD ROBERT W ET UX	CHEVRON U.S.A. INC.	0.180	863/305	N/A	N/A	N/A

4705101920

08/11/2017



Kelly Bass
Land Representative

April 12, 2017

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

4705101928

RE: Hines 4H, 5H, 6H, 7H, 8H, 9H, 10H, 11H

To whom it may concern,

This letter shall serve as confirmation of Chevron U.S.A. Inc.'s right to access the minerals under all roads traversed by the above referenced laterals. Please do not hesitate to contact myself, the undersigned, for any additional questions or to request further information.

Sincerely,

Kelly Bass
Land Representative

Appalachian Mountain Business Unit
Chevron North America Exploration and Production Company
A division of Chevron U.S.A. Inc.
700 Cherrington Parkway, Coraopolis, PA 15108
Tel 412 865 1488
KellyBass@Chevron.com

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WV Department of
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08/18/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION 05101928

Date of Notice Certification: 04/13/2017

API No. 47- _____
Operator's Well No. Hines M06H
Well Pad Name: Hines

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>525698.81</u>
County: <u>Marshall</u>		Northing: <u>4417387.01</u>
District: <u>Washington</u>	Public Road Access: <u>Route 38/Campbell Hill Road</u>	
Quadrangle: <u>Moundsville, WV 7.5'</u>	Generally used farm name: <u>Hines</u>	
Watershed: <u>Middle Grave Creek - Grave Creek</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

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NOT REQUIRED

RECEIVED

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NOT REQUIRED

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Office of Oil and Gas

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 Client's 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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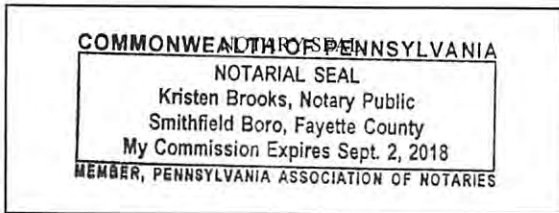
WV Department of
Environmental Protection

Certification of Notice is hereby given:

THEREFORE, I Jenny Hayes, 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.

Well Operator: Chevron Appalachia, LLC
By: Jenny Hayes
Its: Permitting Team Lead
Telephone: 724-564-3755

Address: 800 Mountain View Drive
Smithfield, PA 15478
Facsimile: 724-564-3894
Email: _____



Subscribed and sworn before me this 13th day of April, 2017
Kristen Brooks Notary Public
My Commission Expires Sept. 2, 2018.

Oil and Gas Privacy Notice:

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

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08/18/2017

**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: 3/16/17 **Date Permit Application Filed:** 4/20/17

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: Donald Hines and Wanda L Hines
Address: 301 4th Street
Glen Dale, WV 26038

Name: _____
Address: _____

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

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

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

COAL OPERATOR
Name: _____
Address: _____

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

Name: see attached
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

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*Please attach additional forms if necessary

**WV Department of
Environmental Protection**

08/18/2017

WW-6A Notice of Application Attachment (Hines Pad)

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEOR(S):

Bobby G Baker
RD 3 Box 249
Moundsville, WV 26041

Mark G. Grandstaff
762 Toms Run Rd
Moundsville, WV 26041

Tobias & Jessica Brown
873 Toms Run Lane
Moundsville, WV 26041

Edward D. Knuth
747 Toms Run Lane
Moundsville, WV 26041

Morgan Lacefield
77 Bridge St. Plz
Moundsville, WV 26041

Gerald Oliver
816 Toms Run Lane
Moundsville, WV 26041

Chevron U.S.A. Inc.
800 Mountain View Drive
Smithfield, PA 15478



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08/18/2017

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.

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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 area defined 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, in writing, 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

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.**

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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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08/18/2017

WW-6A
(8-13)

API NO. 47- _____
OPERATOR WELL NO. Hines M06H
Well Pad Name: Hines

Notice is hereby given by:

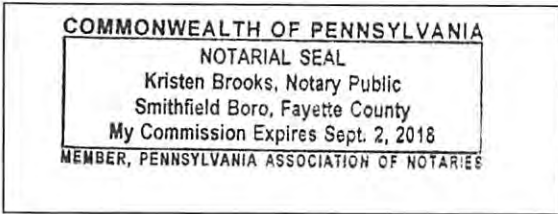
Well Operator: Chevron Appalachia, LLC
Telephone: 724-564-3700
Email: _____

Address: 800 Mountain View Drive
Smithfield, PA 15478
Facsimile: 724-564-3894

Jenny Hayes

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.



Subscribed and sworn before me this 13th day of March 2017.

Kristen Brooks Notary Public

My Commission Expires Sept. 2, 2018.

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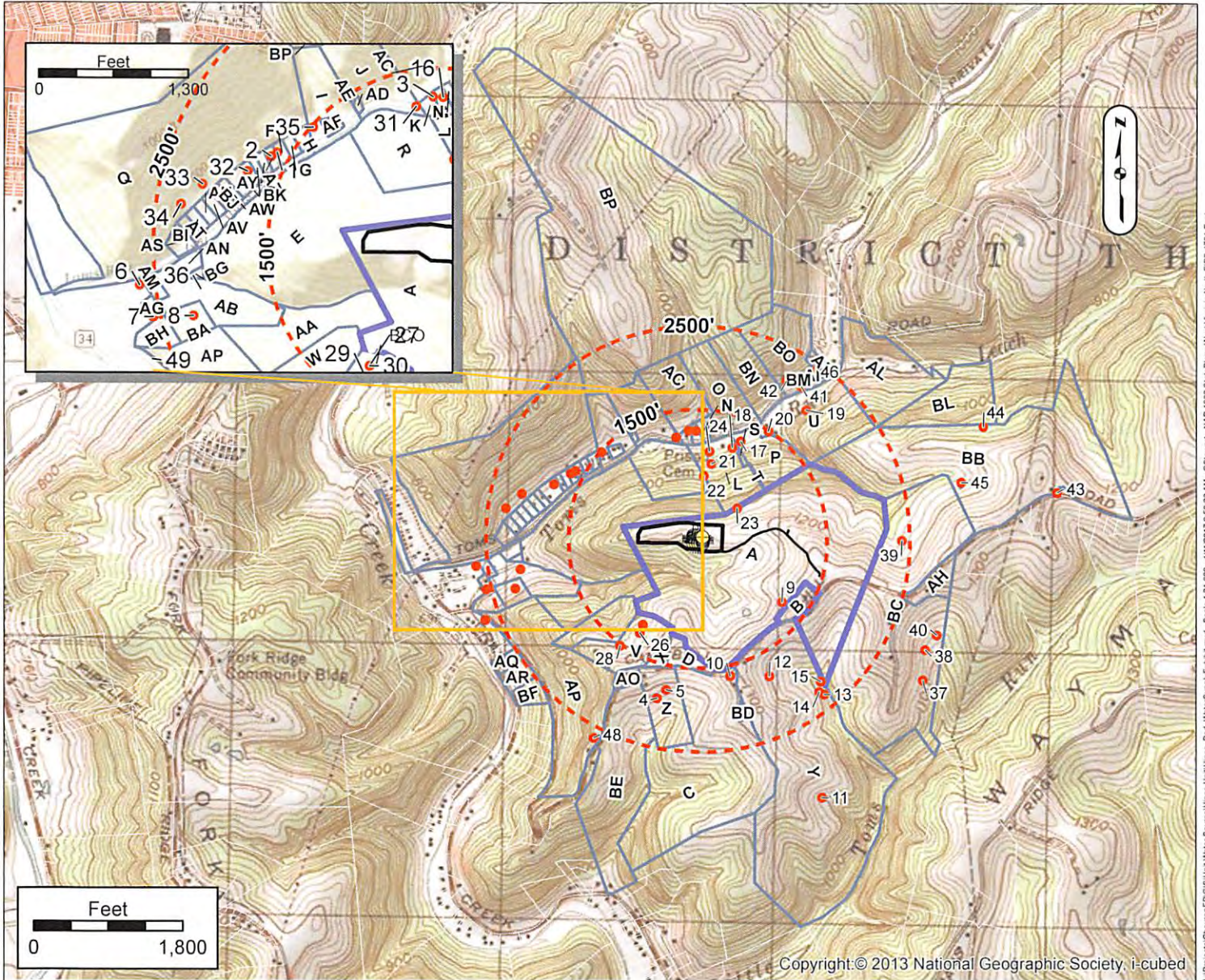
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08/18/2017



WATER SUPPLY EXHIBIT HINES PAD



LOT OWNERS

Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM	Label	OWNER	TM
A	HINES DONALD E ET UX	25-14 12003000000000	Q	HALL CHARLES R	25-14 12002400000000	AG	GOODNIGHT ARNIE	25-14 12006700020000	AW	YOH LYLE WAYNE	25-14 1240007000000000
B	GOSSETT LANCE J ET UX	25-14 12003000002000	R	STATE OF W VA	25-14 12002600000000	AH	ROBERTS EARNEST L ET UX	25-14 12001100010000	AX		25-14 1249999000000000
C	PARSONS HENRY T EST ET AL	25-14 12003100000000	S	FITZSIMMONS JOHN E & ANGELA L	25-14 12002700010000	AJ	PYLES RONNIE ET UX	25-14 90040000000000	AY	SMITH PAUL K & BETTY - LIFE	25-14 1240009000000000
D	WOOD CLESTENE HINES	25-14 12003000004000	T	KNUTH EDWARD DAVID & KATHY JO	25-14 12002800010000	AJ	THOMAS WILLIAM H ET UX	25-14 90039000100000	AZ	ANZLINGER SANDRA SUE & LORI A	25-14 1240010000000000
E	GOODNIGHT ARNIE N ET UX	25-14 12002500000000	U	BUCKE JOHN A ET UX	25-14 12002900000000	AK	THOMAS WILLIAM H ET UX	25-14 90039000200000	BA	GOODNIGHT OSCAR J	25-14 12006700050000
F	BROWN TERRY C ET UX	25-14 12400110000000	V	LACEFIELD MORGAN	25-14 12003000100000	AL	BRADY ROGER A ET UX	25-14 90018000000000	BB	RINE OREY L JR	25-14 11000100000000
G	TUCKER JESS L & HELEN	25-14 12400120000000	W	LACEFIELD MORGAN T	25-14 12003000200000	AM	HARTLEY PHYLIS C	25-14 12006700020000	BC	HOSKINS PATRICIA SUE	25-14 12003100000000
H	YOH RAYMOND P	25-14 12400130000000	X	WOODS C E SIE	25-14 12003000000000	AN		25-14 12006600010000	BD	FULLER ROBERT B ET UX	25-14 12003100010000
I	MCCARTNEY MICHAEL J ET UX	25-14 90044000000000	Y	GOULD SBERRY DOUGLAS EDWARD ET	25-14 12003200000000	AO	PARSONS HENRY T JR & VIDLET	25-14 12004500010000	BE	PARSONS HENRY T EST ET AL	25-14 12004500000000
J	LUCAS LEONARD L ET UX	25-14 90045000000000	Z	BOSTON DONALD M ET UX	25-14 12003300020000	AP	VAN SCYOC DELBERT M ET UX	25-14 12006500000000	BF	HARVETH GEORGE R ET UX	25-14 12006400000000
K	BAKER BOBBY G ET UX	25-14 90044000100000	AA	GOODNIGHT ARNIE N ET UX	25-14 12006600000000	AQ	JENKINS MICHAEL LEE ET UX	25-14 12006400000000	BG		25-14 12006400070000
L	KNUTH EDWARD DAVID ET UX	25-14 12002700000000	AB	GOODNIGHT GEORGE ET UX ESTS	25-14 12006700000000	AR	SCHNEIDER JOHN W & FALLINE J	25-14 12006400000000	BH	GOODNIGHT ARNIE	25-14 12006700010000
M	GRANDSTAFF ELMER JR ET UX	25-14 90044000200000	AC	LUCAS LEONARD L ET UX	25-14 90044000200000	AS	THOMAS HARRY ET UX	25-14 1240001000000000	BI	HOYT MARVIN JUN OR ET UX LIFE	25-14 1240003000000000
N	BAKER BRUCE W ET UX	25-14 90044000400000	AD	LUCAS LEONARD L ET UX	25-14 90045000100000	AT	WHITEATCH DEBBIE ANN	25-14 1240002000000000	BJ	YOH LYLE WAYNE	25-14 1240006000000000
O	OLVER GERALD ET AL	25-14 90044000000000	AE	LUCAS LEONARD L ET UX	25-14 90045000200000	AU	FOSTER NORMA	25-14 1240004000000000	BK	CHURCH OF GOD 7TH DAY TRUSTEES	25-14 1240008000000000
P	BROWN TOBIAS & JESSICA	25-14 12002800000000	AF	MCCARTNEY MICHAEL J ET UX	25-14 90044600010000	AV	FOSTER NORMA	25-14 1240005000000000	BL	BRADY ROGER A ET UX	25-14 90035000000000

Surface Owner: DONALD HINES

County: MARSHALL Office of Oil and Gas

Oil/Gas Owner: DONALD HINES

Township: MOUNDSVILLE, WV

Well Operator: CHEVRON APPALACHIA, LLC

APR 24 2017
GROUNDWATER & ENVIRONMENTAL
Surveyor: SERVICES, INC.

Address: 800 MOUNTAIN VIEW DRIVE
SMITHFIELD, PA. 15478

Address: 301 COMMERCE PARK DR
CRANBERRY TOWNSHIP, PA 16066

Phone: 724-564-3700

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 SUBSURFACE SURVEY. PROPERTY LINES AND OWNER INFORMATION WERE OBTAINED FROM DEEDS, TAX RECORDS, AERIAL PHOTOGRAPHY, GIS, AND FIELD SURVEYED EVIDENCE.

08/18/2017

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L:\Projects\Chevron\EPGIS\Urn Water Sources\Hines_Urn_Hines_Pad_WaterSupply\Exhibit.mxd - Scale 1:1,600 - 4/11/2017 9:56:22 AM - C:\Stewart - NAD 1983 StatePlane West Virginia North FIPS 4701 Feet



WATER SUPPLY EXHIBIT
HINES PAD



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
1	ANDLINGER, SANDRA S. & KORN, LORI A.	Well	724	2315 HANCOCK STREET	304-280-1108
2	ANDLINGER, SANDRA S. (& D. ANDLINGER)	Well	754	2315 HANCOCK STREET	304-280-1108
3	BAKER, BOBBY G.	Well	621	RD 3 BOX 249	304-845-1836
4	BOSTON, DONALD M.	Spring	1,029	1770 CAMPBELL HILL ROAD	304-845-2506
5	BOSTON, DONALD M.	Spring	1,075	1770 CAMPBELL HILL ROAD	304-845-2506
6	GOODNIGHT, ARNIE N.	Well	556	102 GOODNIGHT LANE	304-845-8505
7	GOODNIGHT, ARNIE N.	Well	654	102 GOODNIGHT LANE	304-845-8505
8	GOODNIGHT, OSCAR J.	Well	654	77 GOODNIGHT LANE	304-845-3813
9	GOSSETT, LANCE J.	Spring	1,134	1256 CAMPBELL HILL RD	304-639-4065
10	GOULDSBERRY, DOUGLAS E.	Dug well	1,293*	1584 CAMPBELL HILL RD	304-830-1265
11	GOULDSBERRY, DOUGLAS E.	Spring	1,112*	1584 CAMPBELL HILL RD	304-830-1265
12	GOULDSBERRY, DOUGLAS E.	Spring	1,177*	1584 CAMPBELL HILL RD	304-830-1265
13	GOULDSBERRY, DOUGLAS E.	Spring	1,062*	1584 CAMPBELL HILL RD	304-830-1265
14	GOULDSBERRY, DOUGLAS E.	Stream	1,072*	1584 CAMPBELL HILL RD	304-830-1265
15	GOULDSBERRY, DOUGLAS E.	Stream	1,078*	1584 CAMPBELL HILL RD	304-830-1265

No.	SUPPLY COORDINATES	H04M	H05M	H06M	H07M	H08M	H09M	H10M	H11M
1	39°54'30.344" N 80°42'15.973" W	1,634	1,641	1,648	1,655	1,681	1,674	1,667	1,660
2	39°54'30.006" N 80°42'16.667" W	1,665	1,672	1,679	1,685	1,712	1,706	1,699	1,693
3	39°54'35.290" N 80°41'58.567" W	1,294	1,309	1,324	1,339	1,341	1,326	1,312	1,297
4	39°54'03.560" N 80°42'02.858" W	1,963	1,948	1,933	1,919	1,924	1,939	1,954	1,969
5	39°54'04.579" N 80°42'01.465" W	1,841	1,827	1,812	1,797	1,801	1,816	1,831	1,846
6	39°54'18.882" N 80°42'31.161" W	2,640	2,637	2,635	2,632	2,662	2,664	2,667	2,669
7	39°54'16.135" N 80°42'29.577" W	2,573	2,569	2,565	2,561	2,590	2,594	2,598	2,602
8	39°54'16.293" N 80°42'25.095" W	2,232	2,227	2,223	2,218	2,247	2,251	2,256	2,260
9	39°54'15.123" N 80°41'43.681" W	1,321	1,313	1,305	1,297	1,272	1,280	1,288	1,296
10	39°54'06.289" N 80°41'51.626" W	1,709	1,695	1,681	1,667	1,658	1,672	1,686	1,701
11	39°53'52.097" N 80°41'37.093" W	3,472	3,459	3,446	3,433	3,418	3,431	3,444	3,458
12	39°54'06.339" N 80°41'45.499" W	1,892	1,880	1,867	1,854	1,838	1,851	1,864	1,877
13	39°54'04.283" N 80°41'37.017" W	2,449	2,438	2,427	2,416	2,395	2,406	2,417	2,428
14	39°54'04.579" N 80°41'37.755" W	2,388	2,377	2,366	2,355	2,335	2,346	2,357	2,368
15	39°54'05.810" N 80°41'37.546" W	2,306	2,295	2,285	2,274	2,253	2,264	2,275	2,285

APR 24 2017

WV Department of
Environmental Protection

*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.

08/18/2017



WATER SUPPLY EXHIBIT
HINES PAD



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
16	GRANDSTAFF, MARK G.	Well	617	762 TOMS RUN RD	304-780-8287
17	BROWN, TOBIAS & JESSICA	Well	769	873 TOMS RUN LANE	304-374-3857
18	KNUTH, EDWARD D	Spring	811	747 TOMS RUN LANE	304-845-7519
19	HARDING, JODI L. & TERRY A.	Spring	752	899 TOMS RUN LANE	304-845-6315
20	HARDING, JODI L. & TERRY A.	Stream	712	899 TOMS RUN LANE	304-845-6315
21	KNUTH, EDWARD D	Spring	747	747 TOMS RUN LANE	304-845-7519
22	KNUTH, EDWARD D	Spring	826	747 TOMS RUN LANE	304-845-7519
23	KNUTH, EDWARD D	Spring	996	747 TOMS RUN LANE	304-845-7519
24	KNUTH, EDWARD D	Well	692	747 TOMS RUN LANE	304-845-7519
25	LACEFIELD, MORGAN	Spring	1,142	77 BRIDGE STREET PLZ	304-639-0727
26	LACEFIELD, MORGAN	Spring	1,195	77 BRIDGE STREET PLZ	304-639-0727
27	LACEFIELD, MORGAN	Spring	1,145	77 BRIDGE STREET PLZ	304-639-0727
28	LACEFIELD, MORGAN	Spring	1,142	77 BRIDGE STREET PLZ	304-639-0727
29	LACEFIELD, MORGAN	Spring	1,195	77 BRIDGE STREET PLZ	304-639-0727
30	LACEFIELD, MORGAN	Spring	1,145	77 BRIDGE STREET PLZ	304-639-0727

No.	SUPPLY COORDINATES	H04M	H05M	H06M	H07M	H08M	H09M	H10M	H11M
16	39°54'35.265" N 80°41'57.447" W	1,289	1,304	1,319	1,334	1,335	1,320	1,305	1,290
17	39°54'34.110" N 80°41'50.506" W	1,297	1,311	1,325	1,339	1,327	1,313	1,299	1,285
18	39°54'33.332" N 80°41'51.777" W	1,185	1,199	1,213	1,227	1,217	1,203	1,189	1,175
19	39°54'37.871" N 80°41'40.362" W	2,056	2,067	2,079	2,091	2,072	2,060	2,048	2,037
20	39°54'35.305" N 80°41'46.201" W	1,571	1,583	1,596	1,609	1,593	1,580	1,567	1,555
21	39°54'31.392" N 80°41'54.974" W	921	935	950	965	960	945	930	915
22	39°54'29.966" N 80°41'56.148" W	762	777	791	806	803	788	773	758
23	39°54'26.226" N 80°41'50.920" W	644	653	662	672	649	639	629	620
24	39°54'32.857" N 80°41'55.287" W	1,061	1,076	1,091	1,106	1,102	1,087	1,072	1,057
25	39°54'09.647" N 80°42'08.715" W	1,564	1,551	1,539	1,526	1,543	1,555	1,568	1,580
26	39°54'11.242" N 80°42'05.723" W	1,305	1,292	1,278	1,265	1,280	1,293	1,306	1,319
27	39°54'12.196" N 80°42'05.270" W	1,203	1,190	1,177	1,164	1,179	1,192	1,205	1,218
28	39°54'09.647" N 80°42'08.715" W	1,564	1,551	1,539	1,526	1,543	1,555	1,568	1,580
29	39°54'11.242" N 80°42'05.723" W	1,305	1,292	1,278	1,265	1,280	1,293	1,306	1,319
30	39°54'12.196" N 80°42'05.270" W	1,203	1,190	1,177	1,164	1,179	1,192	1,205	1,218

Office of Oil and Gas

APR 24 2017

WV Department of
Environmental Protection

08/18/2017

* ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.



WATER SUPPLY EXHIBIT
HINES PAD



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
31	OLIVER, GERALD	Stream	734*	816 TOMS RUN LANE	304-845-7675
32	SCAMELHORN, DENISE	Well	705	432 TOMS RUN LANE	304-810-0336
33	SCAMELHORN, DENISE	Spring	737	432 TOMS RUN LANE	304-810-0336
34	SCAMELHORN, DENISE	Spring	767	432 TOMS RUN LANE	304-810-0336
35	YOHO, RAYMOND P.	Well	726	524 TOMS RUN LANE	304-845-5250
36	GOODNIGHT OSCAR J	Well	642	77 GOODNIGHT LANE MOUNDSVILLE, WV 26041	304-845-3813
37	HOSKINS PATRICIA SUE	Spring	1026	19 CHARLES DRIVE MOUNDSVILLE, WV 26041	304-845-9769
38	HOSKINS PATRICIA SUE	Spring	1094	19 CHARLES DRIVE MOUNDSVILLE, WV 26041	304-845-9769
39	HOSKINS PATRICIA SUE	Spring	1016	19 CHARLES DRIVE MOUNDSVILLE, WV 26041	304-845-9769
40	HOSKINS PATRICIA SUE	Pond	1117	19 CHARLES DRIVE MOUNDSVILLE, WV 26041	304-845-9769
41	PYLES RONNIE E ET UX	Well	895	1056 TOMS RUN LANE MOUNDSVILLE, WV 26041	304-845-2288
42	PYLES RONNIE E ET UX	Spring	705	1056 TOMS RUN LANE MOUNDSVILLE, WV 26041	304-845-2288
43	RINE OKEY L JR	Well	1307	6 TRACY LANE MOUNDSVILLE, WV 26041	304-845-1533
44	RINE OKEY L JR	Pond	1130	6 TRACY LANE MOUNDSVILLE, WV 26041	304-845-1533
45	RINE OKEY L JR	Pond	1132	6 TRACY LANE MOUNDSVILLE, WV 26041	304-845-1533

No.	SUPPLY COORDINATES	H04M	H05M	H06M	H07M	H08M	H09M	H10M	H11M
31	39°54'34.462" N 80°42'00.486" W	1,228	1,243	1,258	1,272	1,279	1,264	1,249	1,235
32	39°54'28.713" N 80°42'19.263" W	1,798	1,803	1,808	1,813	1,842	1,837	1,832	1,827
33	39°54'27.565" N 80°42'24.278" W	2,139	2,142	2,145	2,149	2,178	2,174	2,171	2,168
34	39°54'25.851" N 80°42'26.683" W	2,289	2,291	2,293	2,295	2,325	2,323	2,321	2,319
35	39°54'32.558" N 80°42'11.984" W	1,510	1,520	1,530	1,540	1,563	1,553	1,543	1,533
36	39°54'18.6012"N 80°42'24.3252"W	2,117	2,114	2,111	2,108	2,137	2,140	2,144	2,147
37	39°54'06.1092"N 80°41'21.7284"W	3,254	3,247	3,240	3,233	3,214	3,215	3,221	3,228
38	39°54'09.6840"N 80°41'21.4440"W	3,106	3,100	3,094	3,088	3,066	3,067	3,072	3,078
39	39°54'22.6440"N 80°41'25.2816"W	2,521	2,522	2,522	2,523	2,492	2,493	2,492	2,491
40	39°54'11.4516"N 80°41'19.6764"W	3,163	3,159	3,154	3,149	3,125	3,126	3,130	3,135
41	39°54'40.6620"N 80°41'41.1648"W	2,239	2,252	2,264	2,277	2,261	2,262	2,235	2,223
42	39°54'41.2812"N 80°41'43.4832"W	2,194	2,208	2,220	2,234	2,220	2,221	2,194	2,180
43	39°54'28.5516"N 80°41'01.3488"W	4,428	4,431	4,433	4,436	4,404	4,405	4,401	4,399
44	39°54'36.2196"N 80°41'12.9444"W	3,748	3,754	3,760	3,766	3,732	3,733	3,726	3,720
45	39°54'29.6064"N 80°41'16.2096"W	3,307	3,310	3,314	3,318	3,285	3,286	3,281	3,278

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Office of Oil and Gas

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APR 24 2017

WV Department of
Environmental Protection

08/18/2017

*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.



WATER SUPPLY EXHIBIT
HINES PAD



No.	WATER PURVEYOR	SUPPLY	ELEV.	ADDRESS	PHONE #
46	THOMAS WILLIAM H ET UX	Well	689	TOMS RUN RD MOUNDSVILLE, WV 26041	304-845-6459
47	THOMAS WILLIAM H ET UX	Well	689	TOMS RUN RD MOUNDSVILLE, WV 26041	304-845-6459
48	VAN SCYOC DELBERT M ET UX	Spring	1137	2074 CAMPBELL HILL ROAD MOUNDSVILLE, WV	304-280-5104
49	VAN SCYOC DELBERT M ET UX	Spring	693	2074 CAMPBELL HILL ROAD MOUNDSVILLE, WV	304-280-5104

No.	SUPPLY COORDINATES	H04M	H05M	H06M	H07M	H08M	H09M	H10M	H11M
46	39°54'42.4584"N 80°41'39.0876"W	2,481	2,493	2,506	2,518	2,502	2,489	2,477	2,464
47	39°54'42.4584"N 80°41'39.0876"W	2,481	2,493	2,506	2,518	2,502	2,489	2,477	2,464
48	39°53'58.7400"N 80°42'12.6180"W	2,675	2,662	2,648	2,634	2,647	2,661	2,674	2,688
49	39°54'12.5064"N 80°42'29.6208"W	2,690	2,685	2,679	2,673	2,701	2,707	2,712	2,718

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WV Department of
Environmental Protection

*ELEVATIONS SHOWN ARE INTERPOLATED FROM LIDAR TOPO AND SUPPLY COORDINATES ARE FROM OTHERS.

08/18/2017

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: 03/16/2017 **Date Permit Application Filed:** 4/20/17

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: Donald Hines and Wanda L Hines
Address: 301 4th Street
Glen Dale, WV 26038

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>525698.81</u>
County:	<u>Marshall</u>		Northing:	<u>4417387.01</u>
District:	<u>Washington</u>	Public Road Access:	<u>Route 38/Campbell Hill Road</u>	
Quadrangle:	<u>Moundsville, WV 7.5'</u>	Generally used farm name:	<u>Hines</u>	
Watershed:	<u>Middle Grave Creek - Grave Creek</u>			

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 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: 800 Mountain View Drive
Smithfield, PA 15478
Telephone: 724-564-3781
Email: _____
Facsimile: 724-564-3894

Authorized Representative: _____
Address: _____
Telephone: 705 10 10 10
Email: _____
Facsimile: _____

RECEIVED
Office of Oil and Gas

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. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

APR 24 2017
WV Department of
Environmental Protection

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: 03/16/2017 **Date Permit Application Filed:** 4/20/17

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: Donald Hines and Wanda L. Hines
Address: 301 4th Street
Glen Dale, WV 26038

Name: _____
Address: _____



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>525698.81</u>
County: <u>Marshall</u>	Northing: <u>4417387.01</u>
District: <u>Washington</u>	Public Road Access: <u>Route 39/Campbell Hill Road</u>
Quadrangle: <u>Moundsville, WV 7.5'</u>	Generally used farm name: <u>Hines</u>
Watershed: <u>Middle Grave Creek - Grave Creek</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/default.aspx.

Well Operator: Chevron Appalachia, LLC
Telephone: 724-564-3781
Email: _____

Address: 800 Mountain View Dr
Smithfield, PA 15478
Facsimile: 724-564-3894

4705101020

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
APR 24 2017
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

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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.

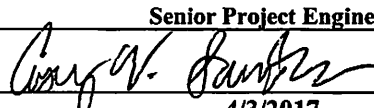
Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except 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, Casey V. Saunders, 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>	WVSPN NAD 27	Easting:	<u>1,663,489.179</u>
County:	<u>Marshall</u>		Northing:	<u>514,385.465</u>
District:	<u>Washington</u>	Public Road Access:		
Quadrangle:	<u>MOUNDSVILLE</u>	Generally used farm name:		
Watershed:				

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials, provided that Chevron U.S.A. Inc. drills the well on WV North NAD27 coordinates of North 514,385.465, East 1,663,489.179. This statement does not serve as notice that has waived its rights to mine all the coal or accept any responsibility for any damage to the well or surface facilities associated with the well by mining activity. This Voluntary Statement of No Objection does not waive's Common Law Property Rights in the State of West Virginia.

<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 checked="" 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>CONSOL Mining Company, LLC</u></p> <p>By: <u>Casey V. Saunders</u></p> <p>Its: <u>Senior Project Engineer</u></p> <p>Signature: </p> <p>Date: <u>4/3/2017</u></p>
---	--

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08/18/2017

WW-6AW
(1-12)

API NO. _____
OPERATOR WELL NO. Hines M06H
Well Pad Name: Hines

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>525698.81</u>
County: <u>Marshall</u>	UTM NAD 83 Northing: <u>4417387.01</u>
District: <u>Washington</u>	Public Road Access: <u>Route 38/Campbell Hill Road</u>
Quadrangle: <u>Moundsville, WV 7.5'</u>	Generally used farm name: <u>Hines</u>
Watershed: <u>Middle Grave Creek - Grave Creek</u>	

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--	---

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APR 24 2017
W.V. Department of
Environmental Protection

08/18/2017

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--	---

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APR 24 2017
WV Department of
Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Jim Justice
Governor

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

February 14, 2017

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 Hines Pad A Well Site, Marshall County

Hines A Unit M4H
Hines A Unit M7H
Hines A Unit M10H

Hines A Unit M5H
Hines A Unit M8H
Hines A Unit M11H

Hines A Unit M6H 51-01928
Hines A Unit M8H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2017-0073 for the subject site to Chevron Appalachia, LLC for access to the State Road for the well site located off of Marshall County Route 38 SLS.

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

Very Truly Yours,

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

Cc: Mandy Fordyce
Chevron Appalachia, LLC
CH, OM, D-6
File

RECEIVED
Office of Oil and Gas
APR 24 2017
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Additives

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

470510107

RECEIVED
Office of Oil and Gas

APR 24 2017

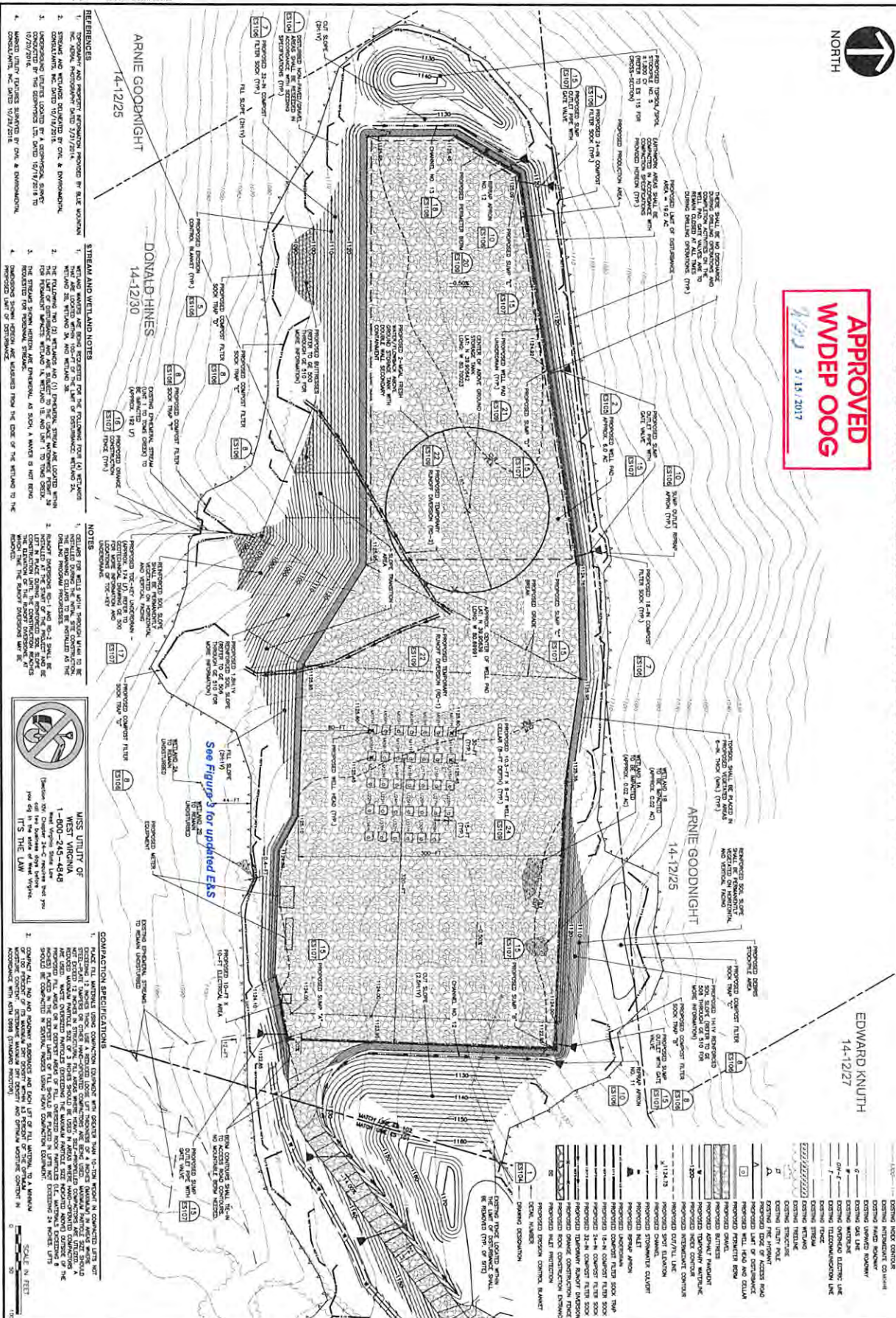
WV Department of
Environmental Protection

08/18/2017



APPROVED
WV DEP OOG
 3/15/2017

FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY



- REFERENCES**
1. ORDINANCE AND PERMIT INFORMATION PROVIDED BY STATE AGENCIES
 2. NC ODEP, PERMIT NUMBER DATED 3/23/2014
 3. STATE AND LOCAL REGULATIONS PROVIDED BY ODEP & ENVIRONMENTAL
 4. UNDESIGNED DETAILS LOCATED BY A DESIGNER, SINCE LOCATED BY THE DESIGNER, ARE DATED 10/17/2016 TO CORRECT FOR PERMITAL PURPOSES.
 5. ALL MATERIALS SHOWN SHOWN BY ODEP & ENVIRONMENTAL CONSULTANTS, INC. DATED 10/23/2016.

- STREAM AND WETLAND NOTES**
1. SETBACK DISTANCES ARE SHOWN FOR THE FOLLOWING FROM (A) WETLANDS AND (B) STREAMS: (1) 100 FEET FROM WETLANDS AND (2) 50 FEET FROM STREAMS.
 2. THE FOLLOWING TWO (2) SETBACKS ARE (1) FRESHWATER STREAMS AND (2) SALTWATER STREAMS AND ARE TO BE MAINTAINED AT ALL TIMES.
 3. THE SETBACKS FROM WETLANDS ARE SHOWN, AS SUCH, A MAJOR SETBACK DISTANCE FROM WETLANDS ARE SHOWN FROM THE EDGE OF THE WETLAND TO THE PROPOSED LINE OF SETTLEMENT.
 4. PROPOSED LINE OF SETTLEMENT.

- NOTES**
1. CALLERS FOR SITES WITH PROPOSED SITES TO BE CONSTRUCTED SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND LOCAL JURISDICTIONS.
 2. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.
 3. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.
 4. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.

MISS UTILITY OF WEST VIRGINIA
 1-800-245-4848
 Section 204 Chapter 24-C requires that you call the Bureau of Public Utilities before you dig. IT'S THE LAW.

- COMPLETION SPECIFICATIONS**
1. PLACE ALL MATERIALS IN ACCORDANCE WITH THE DESIGNER'S SPECIFICATIONS AND THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.
 2. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.
 3. ALL PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE CODES AND REGULATIONS.
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EROSION AND SEDIMENT CONTROL PLAN
 PREPARED FOR:
CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

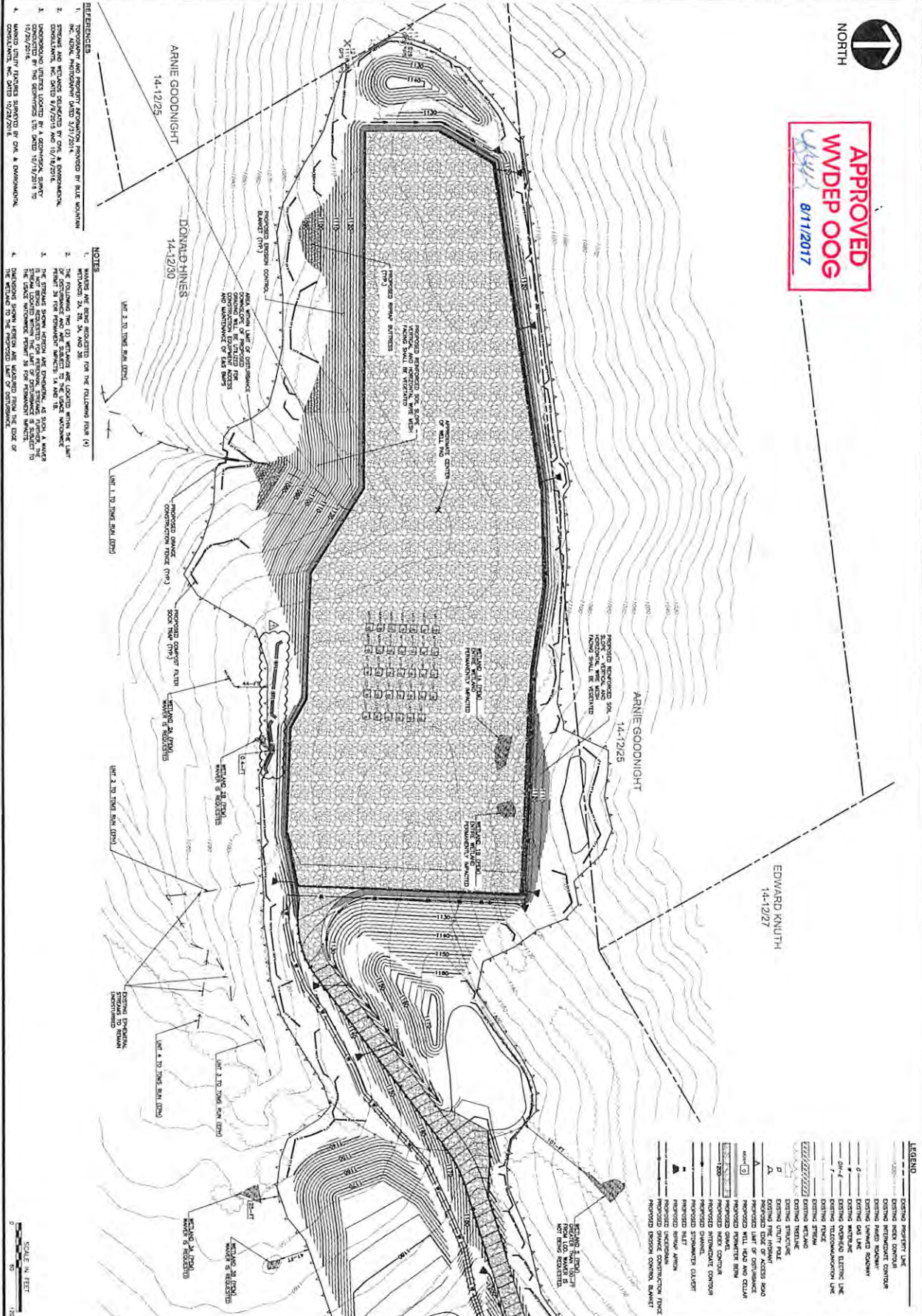
HINES WELL SITE
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA

REVISION RECORD

Date	Revision
02/27/2017	1
02/27/2017	2
02/27/2017	3
02/27/2017	4
02/27/2017	5
02/27/2017	6
02/27/2017	7
02/27/2017	8
02/27/2017	9
02/27/2017	10

Civil & Environmental Consultants, Inc.
 4000 Triangle Lane, Suite 200 - Export, PA 15622
 724-327-5200 - 800-444-3333
 www.cecinc.com

08/18/2017



- REFERENCES**
1. HINES AND PROPERTY ACQUISITION REPORT BY BLUE BOOK INC. IDEAL INVESTMENT DATED 3/7/2014
 2. STRONG AND WILKINS DESIGNED BY CIVIL & ENVIRONMENTAL CONSULTANTS INC. DATED 1/12/2016
 3. DONALD HINES DEED DATED 1/12/2016 AND 1/12/2016
 4. EDWARD KNUTH DEED DATED 1/12/2016 AND 1/12/2016

- NOTES**
1. WELLS ARE TO BE LOCATED ON THE FOLLOWING PLOT (1) OF THE TRACTS (1) WITHIN THE LAR OF THE TRACTS AND ARE SUBJECT TO THE LOCAL WATERWORKS DISTRICT AND THE LOCAL WATERWORKS DISTRICT.
 2. THE STRONG AND WILKINS REPORT AND CONDUIT, AS SHOWN, ARE TO BE LOCATED ON THE TRACTS WITHIN THE LAR OF THE TRACTS AND ARE SUBJECT TO THE LOCAL WATERWORKS DISTRICT AND THE LOCAL WATERWORKS DISTRICT.
 3. THE STRONG AND WILKINS REPORT AND CONDUIT, AS SHOWN, ARE TO BE LOCATED ON THE TRACTS WITHIN THE LAR OF THE TRACTS AND ARE SUBJECT TO THE LOCAL WATERWORKS DISTRICT AND THE LOCAL WATERWORKS DISTRICT.
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SCALE IN FEET
 0 50 100

HINES WELL PAD
 WASHINGTON DISTRICT
 MARSHALL COUNTY, WEST VIRGINIA
 PREPARED FOR
CHEVRON APPALACHIA, LLC
 800 MOUNTAIN VIEW DRIVE
 SMITHFIELD, PA 15478

Project Number: 14-05H-004
 Date: 7/26/2017
 Drawn by: jwh
 Checked by: jwh
 Project Manager: jwh

FIG. 3

REVISION RECORD

No.	Date	REVISION PER WVDEP COMMENT
01	07/26/2017	
02		
03		
04		
05		
06		
07		
08		

CEC
 Civil & Environmental Consultants, Inc.
 4000 Triangle Lane, Suite 200 • Export, PA 15632
 724-327-0200 • 800-441-1111
 www.cecinc.com

08/18/2017