



 west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Thursday, January 17, 2019
 WELL WORK PERMIT
 Horizontal 6A / New Drill

AMERICAN PETROLEUM PARTNERS OPERATING, LLC
 4600 J. BARRY COURT SUITE 310

CANONSBURG, PA 15317

Re: Permit approval for CASTLE BLACK 7UH
 47-051-02119-00-00

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: CASTLE BLACK 7UH
 Farm Name: ECO-VRINDABAN INC., DBA
 U.S. WELL NUMBER: 47-051-02119-00-00
 Horizontal 6A New Drill
 Date Issued: 1/17/2019

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

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

PERMIT CONDITIONS

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



west virginia department of environmental protection

Oil and Gas Conservation Commission
601 57th Street SE, Charleston, WV 25304
304-926-0499 Ext 1274

Barry K. Lay, Chairman
dep.wv.gov

December 12, 2018

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-02119

COMPANY: American Petroleum Partners Operating, LLC

FARM: Eco-Vrindaban, Inc. dba Gorakshya-Seva et al Castle Black-7UH

COUNTY: Marshall DISTRICT: Webster QUAD: Majorsville

The deep well review of the application for the above company is **Approved to drill to the Point Pleasant for completion. Pooling Docket No. 269-261.**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: *yes, Docket 269-261 Exception Location Hearing, Castle Black-5UH 47-051-02044; Castle Black-9UH 47-051-02120; Castle Black-10UH 47-051-02121; Winterfell-5UH 47-051-02118; Wintefell-10UH 47-051-02106
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

Susan Rose
 Administrator



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
dep.wv.gov

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

TO: American Petroleum Partners Operating, LLC
4600 J. Barry Court Suite 310
Canonsburg, Pa 15317

DATE: September 13, 2018
ORDER NO.: 2018-W-7

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.*, to American Petroleum Partners Operating, LLC (hereinafter "APP" 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. APP is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 4600 J. Barry Court Suite 310, Canonsburg, Pa 15317.
3. On May 7, 2018 APP submitted a well work permit application identified as API# 47-051-02044. The proposed well is to be located on the Castle Black Pad in Webster District of Marshall County, West Virginia.
4. On August 15, 2018 APP requested a waiver for Wetlands 1 and 2 outlined in Attachment 1, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-051-02044.

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “in 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 “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 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

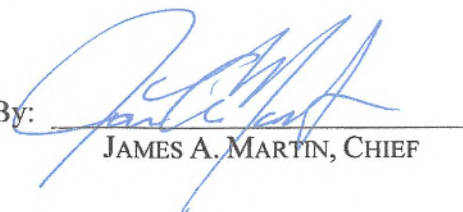
West Virginia Code §22-6A-12(b) requires, in part, that “no well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland. The Office of Oil and Gas grants the request for a waiver for Wetlands 1 and 2 from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-051-02044. The Office of Oil and Gas hereby **ORDERS** that APP shall meet the following site construction and operational requirements for the Castle Black 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 1 is situated at an elevation that runoff from the construction cannot impact the wetland
- d. Wetland 2 shall have a layer of twenty-four inch (24”) super silt fence and a layer of eighteen inch (18”) compost filter sock 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.

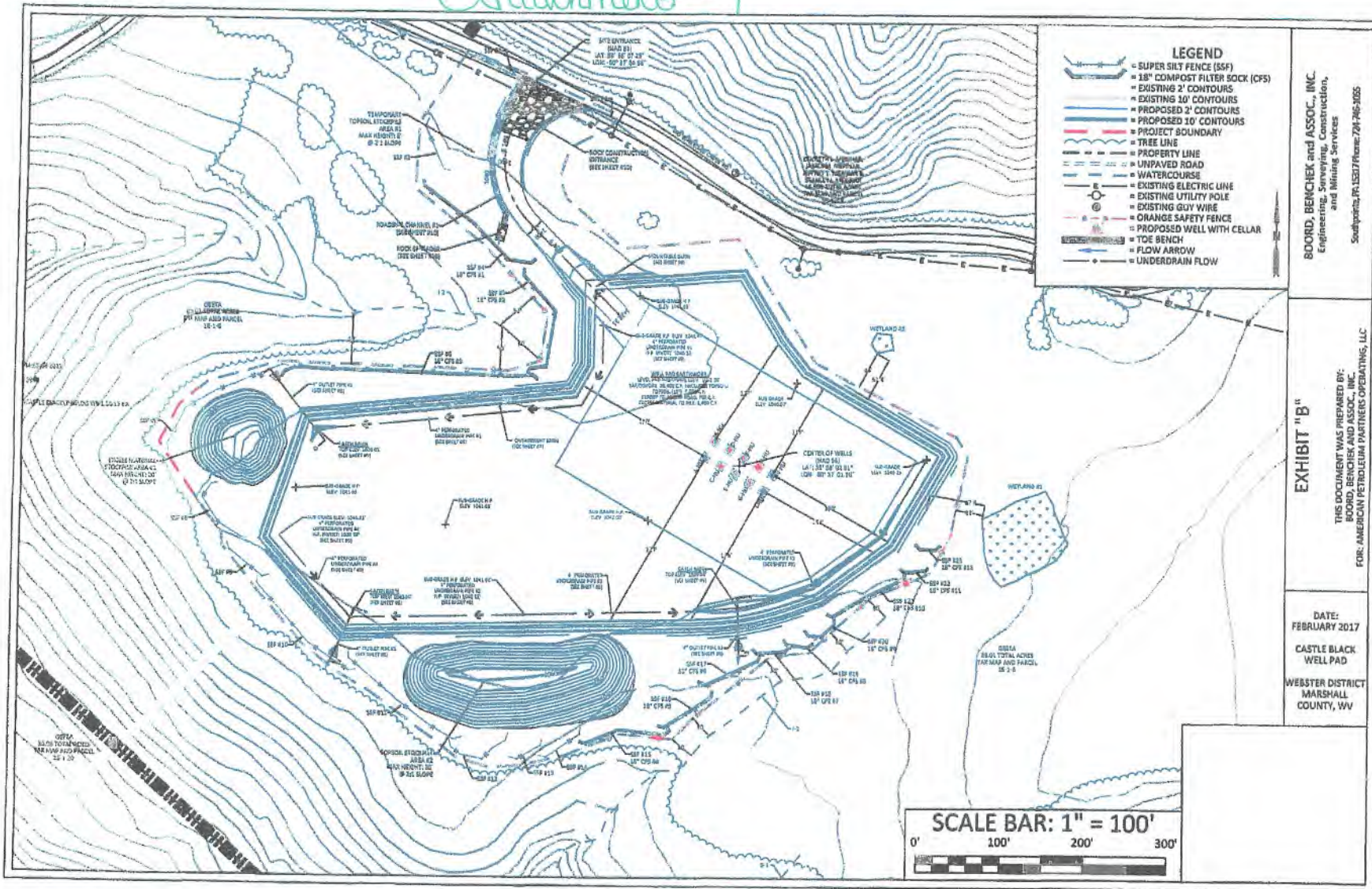
Thus ORDERED, the 13th day of September, 2018.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By: 
JAMES A. MARTIN, CHIEF

Attachment #1

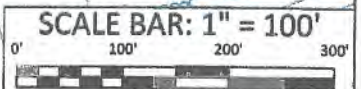


- LEGEND**
- SUPER SILT FENCE (SSF)
 - 18" COMPOST FILTER SOCK (CFS)
 - EXISTING 2' CONTOURS
 - EXISTING 10' CONTOURS
 - PROPOSED 2' CONTOURS
 - PROPOSED 10' CONTOURS
 - PROJECT BOUNDARY
 - TREE LINE
 - PROPERTY LINE
 - UNPAVED ROAD
 - WATERCOURSE
 - EXISTING ELECTRIC LINE
 - EXISTING UTILITY POLE
 - EXISTING GUY WIRE
 - ORANGE SAFETY FENCE
 - PROPOSED WELL WITH CELLAR
 - TOE BENCH
 - FLOW ARROW
 - UNDERDRAIN FLOW

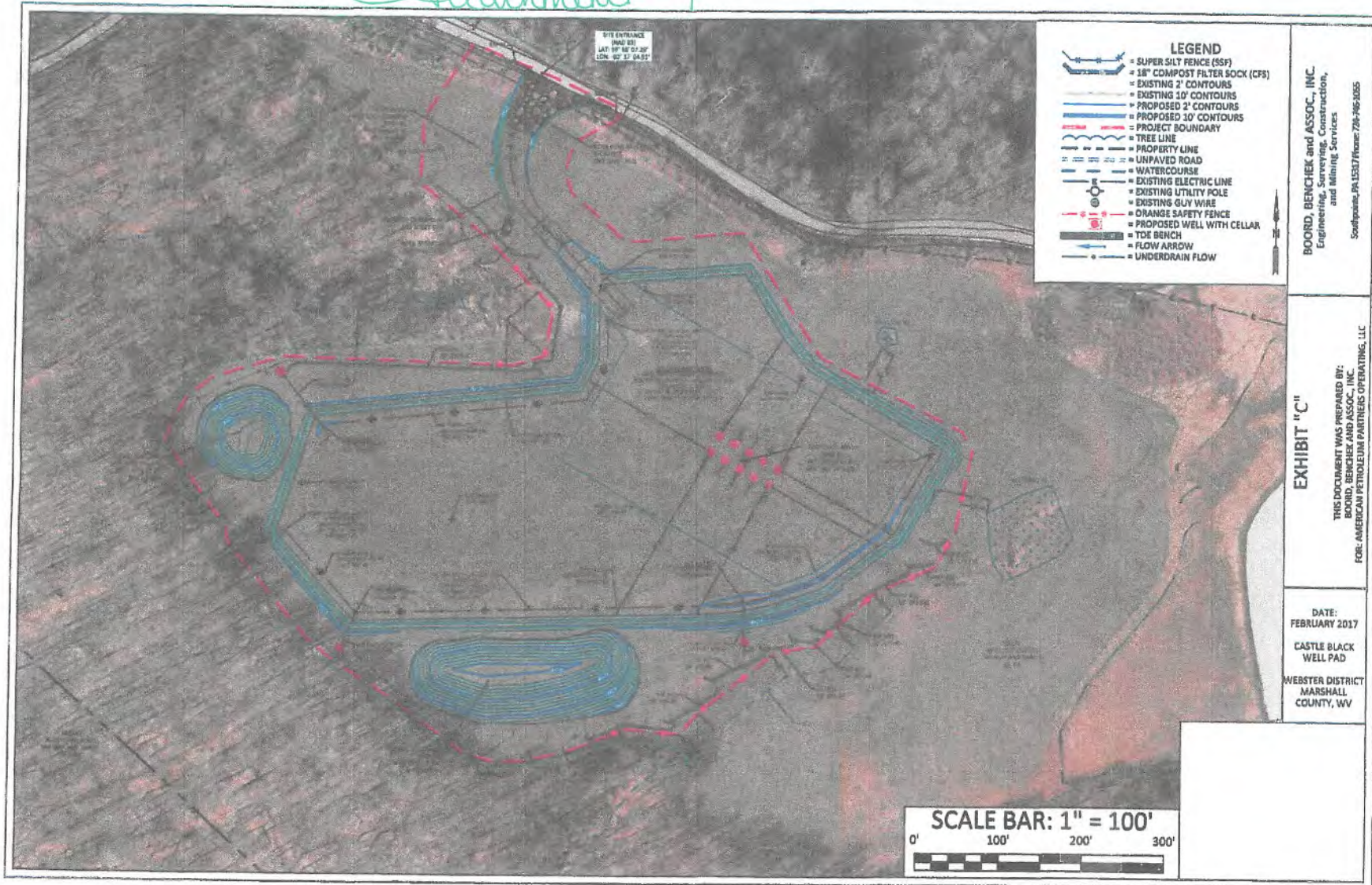
BOARD, BENCHEK and ASSOC., INC.
 Engineering, Surveying, Construction,
 and Mining Services
 Southport, W. VA. 25577 Phone: 724-745-1025

EXHIBIT "B"
 THIS DOCUMENT WAS PREPARED BY:
BOARD, BENCHEK and ASSOC., INC.
 FOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC

DATE: FEBRUARY 2017
 CASTLE BLACK WELL PAD
 WEBSTER DISTRICT MARSHALL COUNTY, WV



Attachment #1



SITE ENTRANCE
(NAD 83)
LAT: 39° 46' 02.20"
LON: 80° 57' 04.95"

- LEGEND**
- = SUPER SILT FENCE (SSF)
 - = 18" COMPOST FILTER SOCK (CFS)
 - = EXISTING 2' CONTOURS
 - = EXISTING 10' CONTOURS
 - = PROPOSED 2' CONTOURS
 - = PROPOSED 10' CONTOURS
 - = PROJECT BOUNDARY
 - = TREE LINE
 - = PROPERTY LINE
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 - = TDE BENCH
 - = FLOW ARROW
 - = UNDERDRAIN FLOW

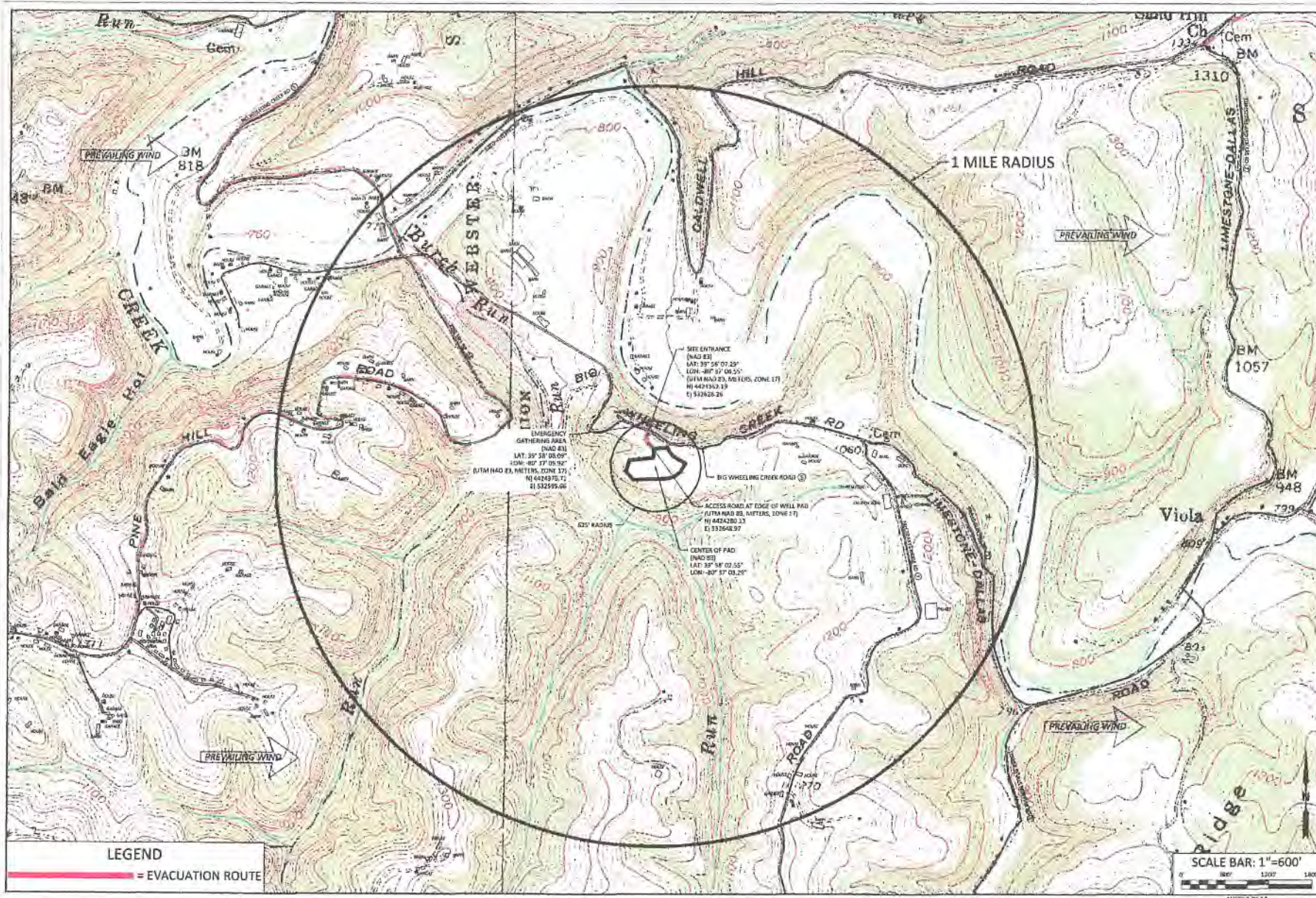
BOORD, BENCHEK and ASSOC., INC.
Engineering, Surveying, Construction,
and Mining Services
Southpointe, PA 15317/Phone: 724-946-9055


EXHIBIT "C"

THIS DOCUMENT WAS PREPARED BY:
BOORD, BENCHEK AND ASSOC., INC.
FOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC

DATE:
FEBRUARY 2017
CASTLE BLACK
WELL PAD
WEBSTER DISTRICT
MARSHALL
COUNTY, WV

SCALE BAR: 1" = 100'
0' 100' 200' 300'



LEGEND
 = EVACUATION ROUTE

SCALE BAR: 1"=600'
 0 300 600 900 1200 1500

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

TOPOGRAPHIC MAP OF LOACTION
 THIS DOCUMENT WAS PREPARED BY:
 BOORD, BENCHEK AND ASSOC., INC.
 FOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC

DATE: FEBRUARY 2017
 CASTLE BLACK WELL PAD
 WEBSTER DISTRICT, MARSHALL COUNTY, WV

REVISIONS	DESCRIPTION



11/3/14

Wetland and Perennial Stream Waiver Request

API Number: TBDOperator's Well Number: Castle Black A-HUWell Operator: American Petroleum Partners Operating, LLCWell Number: Castle Black A-HUWell Pad Name: Castle Black Well PadCounty, District, Quadrangle of Well Location: Majorsville, WV

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.

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.

This project is located in Webster District, Marshall County off of Big Wheeling Creek Road. There are two wetlands identified in the vicinity of the project which require a waiver.

Wetland #1: is located immediately east of the well pad.

Wetland #2: is located immediately north of the well pad.

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

a. A no-action alternative would result in the inability to extract any gas from this unit. The only available area for pad construction would be in the proposed location as shown in the attached drawings. Within this unit boundary there are no other viable pad locations, due to limitations of coal blocks, steepness of slope, impacts to water of the U.S. and due to encroachment onto existing well pads. In short, the land surface and gas below would be unable to be developed in the Unit Boundary shown.

b. Refer to Exhibit "B" for the following elimination of alternatives that would move the well pad greater than 100 feet away from the wetlands in question while keeping the same project location.

North & East: moving the well pad north and/or east results in becoming closer to the wetlands and/or impacts to the wetlands.

South & West: moving the well pad south and/or west results in stream impacts.

Refer to Exhibit "A" for the following elimination of alternatives that would move the well pad in a completely new location within the project boundary.

North & West: The site is unable to be moved north or west as it would land outside the unit boundary.

East: The site is unable to be moved east because there is an existing well pad there.

Southeast less than 1000 feet: The site is unable to be moved southeast within the existing coal block as there is an existing well pad there.

Southeast greater than 1000 feet: The site is unable to be moved southeast greater than 1000 feet as it would be outside the coal block and land inside the area being mined/to be mined by Murray Ohio County Mine.

c. To maintain the 100 foot buffer would be to impact streams south and west of the of site. In addition, the minimum space needed for a drill rig would be unable to be obtained.

d. This proposed project is the least environmentally damaging practicable alternative as it does not directly impact any aquatic resources. Any other viable alternative would result in direct impacts and elimination of the water of aquatic resources.

11/3/14

Wetland and Perennial Stream Waiver Request

API Number: TBDOperator's Well Number: Castle Black A-HU

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.

There are two wetlands located within 100 foot of the pad's limit of disturbance.

The site has been designed so that the well pad is at a lower elevation than both wetlands. Specifically, the highest elevation of the well pad surface is at elevation 1042 and its outside edges are graded even lower to direct flow to the proposed catch basins. Wetland 1 covers an area of 7,800 SF and varies in elevation from 1044 to 1050. Wetland 2 covers an area of 480 SF and is at an approximate elevation of 1047. The result of this elevation change from wetland to pad prevents any potential spills from reaching the wetlands. In addition, an earthen berm is proposed to be placed on the perimeter of the pad. It is 2.5 feet in height with a top width of 2 feet and 2:1 slopes with a base of 12 feet.

In addition, all outer slopes of the well pad near these wetlands are cut slopes. This results in any runoff being directed toward the pad.

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

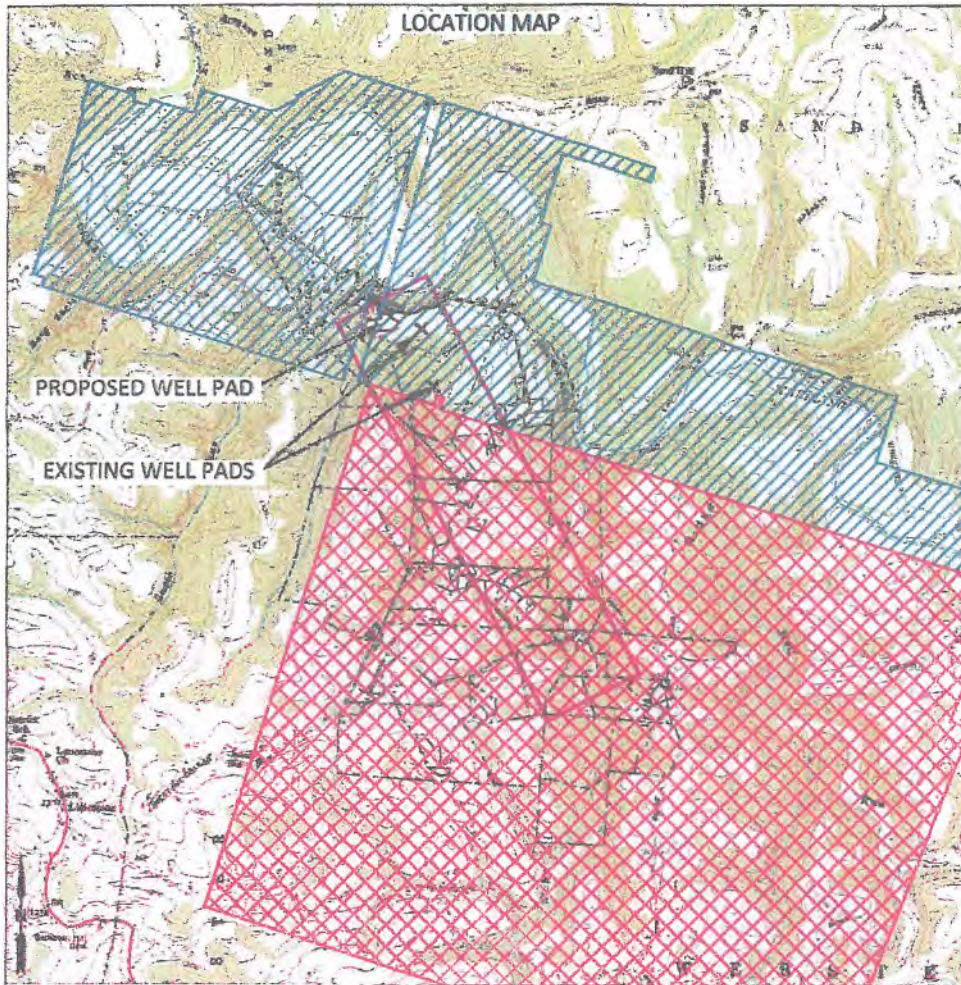
- a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.

An Erosion and Sediment Control and Site Plan have been provided. In addition blow ups of the areas in question are also provided with this waiver.

All of the proposed well pad below wetland 1 and 2 will be in cut. Therefore, no spills or contamination would be able to reach the wetlands. While the distance from the LOD is only 33' for wetland 1 the closest distance to the well pad cut slope is 67.5'. Wetland 2 is 44' away from the LOD and 61.4' from the well pad cut slope.

In addition, an earthen berm is proposed to be placed on the perimeter of the pad. It is 2.5 feet in height with a top width of 2 feet and 2:1 slopes with a base of 12 feet.

This provides more than adequate containment during and after drilling activities.



<p>LEGEND</p> <ul style="list-style-type: none"> --- PROJECT BOUNDARY PROPERTY LINES PRELIMINARY UNIT BOUNDARY SOLID COAL BLOCK AREA CURRENTLY OR TO BE MINED BY MURRAY OHIO COUNTY MINE 	<p>EXHIBIT "A"</p> <p>SCALE BAR: 1" = 2000'</p> <p>0' 2000' 4000' 6000'</p>	<p>CENTER OF WELL PAD LAT: 39° 58' 02.55" LON: 80° 37' 03.29"</p>
<p>Applicant / Well Operator Name AMERICAN PETROLEUM PARTNERS OPERATING, LLC</p>		<p>Municipality - County - Code WEBSTER DISTRICT - MARSHALL - 51</p>
<p>Address: 380 SOUTHPIECE BOULEVARD, PLAZA 2, SUITE 120, CAMONSBURG, PA 25817</p>		<p>USGS 7 1/2 Quadrangle Map Name - Map Section MADISONVILLE, WV - 5</p>
<p>Well(Farm) Name CASTLE BLAZE WELL PAD</p>		

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

1) Well Operator: American Petroleum Partners 494521257 Marshall Webster Majorsville
Operator ID County District Quadrangle

2) Operator's Well Number: Castle Black-7UH Well Pad Name: Castle Black

3) Farm Name/Surface Owner: Geeta Public Road Access: Big Wheeling Creek Road

4) Elevation, current ground: 1044.00' Elevation, proposed post-construction: 1042.00'

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

(b) If Gas Shallow _____ Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant Formation 11,395' / 130' thick 10,141 or .89 psi per foot / Utica Formation 11,212 150' thick / 10,000 psi or .89 psi per foot.

8) Proposed Total Vertical Depth: 11,395' ✓

9) Formation at Total Vertical Depth: Utica Point Pleasant

10) Proposed Total Measured Depth: 19,954' ✓

11) Proposed Horizontal Leg Length: 8,221' ✓

12) Approximate Fresh Water Strata Depths: 130', 875' ✓

13) Method to Determine Fresh Water Depths: Nearest offset well

14) Approximate Saltwater Depths: Na

15) Approximate Coal Seam Depths: 625', 825' ✓

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated. drilling in pillar - Mine maps attached.

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: The Ohio County Mine-Murray American Energy and Consolidation Coal Company
Depth: 625', 825' ✓
Seam: Pittsburgh #8
Owner: Murray American Energy & Consolidation Coal Company

RECEIVED
Office of Oil and Gas

AUG 29 2018

WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47- 051 - 01/18/2019

OPERATOR WELL NO. Castle Black-7UH

Well Pad Name: Castle Black

4705102119

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	30"	New	LS	81.3#	60'	60'	CTS
Fresh Water	20"	New	J-55	94#	1,025'	1,025' ✓	15.6ppg to sur 521 sx w/30% OH excess
Coal	13 3/8"	New	J-55	54.5#	2,111'	2,111'	15.2ppg to sur 556 sx W/30% OH Excess
Intermediate	9 5/8"	New	HCP-110	40#	10,112'	10,112'	15.4ppg to sur 936 sx w/30% OH excess
Production	5 1/2"	New	HCP-110	23#	19,954'	19,954'	14.8ppg TOC >=200' above 9.625 shoe
Tubing	2 7/8"	New	J-55	6.5#	11,400	11,400'	
Liners							

ju
8/23/18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	36"		300		Type 1	Lead yield 2.38 Tail 521 sx Yield 1.18
Fresh Water	20"	24"	.438	2,110	400	Class A	Lead yield 2.38 Tail 556 sx Yield 1.27
Coal	13 3/8"	17.5"	.380	2,730	688	Class A	Lead Yield 2.38 Tail 556 sx Yield 1.27
Intermediate	9 5/8"	12.38"	.395	7,870	3,166	Class A	Lead Yield 1.28 Tail 936 sx Yield 1.28
Production	5 1/2"	8.75"	.361	14,360	11,000	Class H	Lead Yield 1.27 Tail 4714 sx Yield 1.27
Tubing	2 7/8"	5.14"	.217	10,570	8,000		
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

RECEIVED
Office of Oil and Gas
AUG 29 2018
WV Department of
Environmental Protection

4705102119 *je*
8/23/18

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

Drill the vertical depth to approximately 11,395'. Drill the horizontal leg- stimulate and produce the Utica formation. Should we encounter a unanticipated void we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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

The stimulation will be in multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. Our maximum pressure is not to exceed 10,000 lbs.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 9.48 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.46 acres

23) Describe centralizer placement for each casing string:

Conductor- No centralizers used. Freshwater/Surface- Bow Spring centralizers every 3 joints to 100' from surface. 1st Intermediate - Bow Spring centralizers every 3 joints to 100' from surface. 2nd Intermediate - Bow Spring centralizers every 3 joints to 100' from surface. Production - Rigid bow springs every third joint from KOP to TOC. Rigid every joint to KOP.

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

Type 1 to Surface. Surface/Freshwater - 15.6 Class A +2% CaCl, 30% OH Excess Yield =1.18. 1st Intermediate - 15.6 ppg Class A +2% CaCl, 0.25 Lost Circ. 30% Yield =1.27. 2nd Intermediate- 2 Stage cement job with 15.4 ppg Class A lead + additives (antisettling, antifoam, fluid loss retarder, salt, viscosifer) & 15.4 Class A tail with additives (antisettling, antifoam, fluid loss retarder, salt, dispersant or 12.0 Class A lead + additives (+/-5% dispersant, 10% light weight additive, 75% fluid loss additive, and 1.15% fluid loss additive, Yield=1.28) 15.4 ppg Class A Tail + additives (+/- fluid loss additive, & .5% light weight additive, Yield 1.28), 0.125#/SK lost circ 30% excess to Surface. Production- 12.5ppg Class H Lead +additives and 14.8 ppg Class H Tail + additives (antifoam, antisettling, extender,dispersant) 15%excess TOC>=200' above 9.625" shoe.

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25) Proposed borehole conditioning procedures:

Conductor - The hole is drilled w/ air and casing is run on air. Apart from insuring hole is clean via air circulation at TD there are no other conditioning procedures. Freshwater/Surface- The hole is drilled w/air or Freshwater based mud and casing is run on air. Once casing is at setting depth, fill with KCl water circulate a minimum of one hole volume prior to pumping cement. First Intermediate- Drilled on Air. Once casing is at a setting depth, circulate a minimum of one hole volume prior to pumping cement. Second Intermediate - Drilled on air. Fill with salt saturated water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement. Production- drilled on +/- 14.8ppg SOBM. Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

Fresh Water Protection String:		Cement Additives	
Allied Material Name	Additive (Material) Type	Additive (Material) Description	CAS #
CCAC (Class A Common)	Base Cement	Grey powder	65997-15-1
CA-100	Accelerator	White, flake	7447-40-7 7732-18-5 7647-14-5

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DRILLING WELL PLAN

**Castle Black-7UH
Utica HZ
Marshall Co, WV**

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Horizontal Well Plan with Cemented Long String Completion

HOLE	RIG	CASING	GEOLOGY	Top TVD	MD	MUD	CEMENT	DIRECTIONAL	LOGS	BITS	COMMENTS
36"	Conductor Rig	30" 81.3# LS				AIR	To Surface	N/A	N/A		Stabilize surface fill/soil
			Conductor	60	60						
			Sewickley Coal	625							
24"	Top-Hole	20" 94# J-55 BTC	Pittsburgh Coal	825		AIR	15.6ppg to surface 521sx w/ 30% OH excess	20" Air Hammer Totco at TD	CBL Log Cased hole NPHI, GR at Pilot TD in Pilot Well only	Carbide hammer bit	Protect fresh groundwater
			Surf. Casing	1025	1025						
			Big Lime	1695	1811						
17.5"	Top-Hole	13-3/8" 54.5# J-55 BTC	Greenbrier Group	1762		AIR	15.2ppg to surface 556sx w/ 30% OH excess	Center Rock 15" Air Hammer Gyro above Coal, (Mine Approval) Totco at TD		Hammer bit w/ diamond gage Test casing to 800psi	
			Big Injun	1811							
			Int. Casing	2111	2111						
			Tully LS	6386							
12.375" - 12.25"	Horizontal Rig	9-5/8" 43.5# HCP 110 BTC	Hamilton	6415		AIR	15.4ppg to surface 1025sx w/ 30% OH excess	12" Air Hammer Totco every 400ft	MWD surveys Mud Logger - 90 ft samples	Hammer bit w/ full face diamond Test casing to 1000psi	PU cleanout assembly, dress plug, displace to 12.0ppg SOBM, PU Curve BHA, time drill / KO cement plug. Expect Seepage in curve
			Cherry Valley	6524							
			Marcellus Shale	6526							
			Onondaga Ls	6560							
			Oriskany Sandstone	6789							
			Salina Group	7373							
			Vernon Shale	8128							
			Lockport Dolomite	8345							
			Clinton Group	9060							
			Medina Group	9132							
			Queenston Shale	9312	10112						
8.5" Curve/Lateral	Horizontal Rig	5-1/2" 23# HCP-110 BPN	Utica Shale	11212		+/- 14.5 ppg SOB	14.8ppg TOC >= 200' Above 9.625 shoe 2198sx w/ 15% OH excess	6.75" PDM & MWD 2.38° ADJ Bend (10° Build DLS)	MWD Surveys Mud Logger - 30 ft samples (Curve) 90 ft samples (Lateral)	PDC 5 - 25 WOB 100 - 120 RPM 450 - 500 GPM	Geosteering
			Point Pleasant Formation	11395							
			Curve LP								
			TARGET								
			Production Casing								

8.5 Hole - Cemented Long String 5-1/2" 23# HCP-110 BPN

Lateral Targets	Landing Point 11395 TVD 11733 MD	90.5 degrees	8221 ft Lateral Length	90.5 Inc 325 Az	Total Depth 11395 TVD 19954 TD
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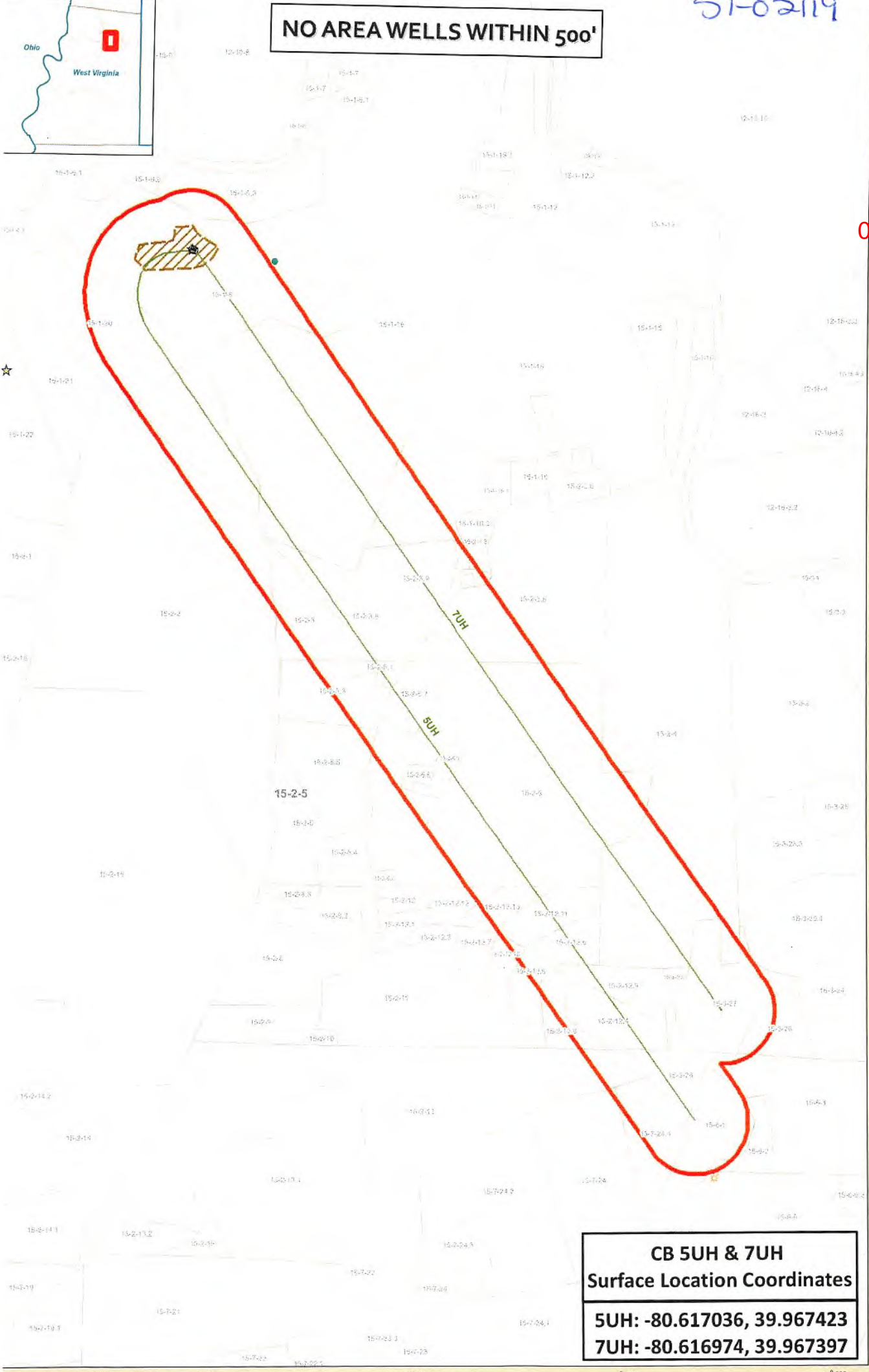
Handwritten signature and date: 8/23/18

51-02119

NO AREA WELLS WITHIN 500'



01/18/2019



CB 5UH & 7UH
Surface Location Coordinates
5UH: -80.617036, 39.967423
7UH: -80.616974, 39.967397

CB 5UH & 7UH - Area of Review

Marshall County
West Virginia
Coordinate System: NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Datum: North American 1983
Linear Units: Meter
Map Scale Units: 1:12,000
Scale: 1 inch = 1,000 feet
Map Author: JKS
Map Date: 8/2/2018

- Well SHL
- Well Pad
- Laterals
- 500' buffer
- Parcels
- Other
- Abandoned Well
- Active Well
- Marcellus Permit
- Marcellus Well
- Permit / Future Use
- Plugged
- Shut-in
- Utica Permit
- Utica Well



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WW-9
(4/16)

47051021819

API Number 47 - 051
Operator's Well No. Castle Black-7UH

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name American Petroleum Partners Operating, LLC OP Code 494521257

Watershed (HUC 10) Upper Ohio South Quadrangle Majorsville

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number See attached sheet)
- 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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air/water based mud through intermediate then SOBM

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

Additives to be used in drilling medium? See attached sheet with list.

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill - See attached sheet

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

-Landfill or offsite name/permit number? See Attached Sheet

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

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

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

Company Official Signature *Braulio Silva*

Company Official (Typed Name) Braulio Silva

Company Official Title Vice President - Drilling

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Subscribed and sworn before me this 24th day of August, 20 18

Teresa L. Lesko

Notary Public
Commonwealth of Pennsylvania - Notary Seal
Teresa L. Lesko, Notary Public
Washington County
My commission expires July 17, 2022
Commission number 1205105
Member, Pennsylvania Association of Notaries

My commission expires 7-17-2022

Operator's Well No. Castle Black-7UH

American Petroleum Partners Operating, LLC

4705102119

Proposed Revegetation Treatment: Acres Disturbed 9.48 Prevegetation pH 6.0

Lime 2-3 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20 or Equal

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw at 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Rye Grass	40	Crownvetch	10-15
Filed Bromegrass	40	Tall Fescue	30
Spring Oats	96	Perennial Ryegrass	20

*Refer to attached Reclamation Plan for further detail.

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Jim [Signature]*

Comments: _____

Title: WW DEP Oil and Gas Inspector

Date: 8/23/18

Field Reviewed? Yes No

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Additives for Drilling Medium

CALCIUM CHLORIDE POWDER
CARBO TEC
CARBO-GEL 2
CARBO-TEC S
ECCO-BLOK
LIME
MIL-CARB TM
MIL-CLEAN
MIL-SEAL
NEXT BASE eC
NEXT DRILL
NEXT-HOLD
NEXT-MUL
OMNI-COTE
MIL-BAR
NEXT-MUL HT
SODA ASH
POTASSIUM CHLORIDE

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SI-02119

Cuttings Disposal/Site Water

Cuttings –Haul off Company:

Eap Industries, Inc. DOT # 0876278
1575 Smith Two State Rd. Atlasburg, PA 15004
1-888-294-5227

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Waste Management
200 Rangos Lane
Washington, PA 15301
724-222-3272

Environmental Coordination Services & Recycling (ECS&R)
3237 US Highway 19
Cochranon, PA 16314
814-425-7773

Disposal Locations:

Apex Environnemental, LLC Permit # 06-08438
11 County Road 78
Amsterdam, OH 43903
740-543-4389

Westmoreland Waste, LLC Permit # 100277
111 Conner Lane
Belle Vernon, PA 15012
724-929-7694

Sycamore Landfill Inc. Permit #R30-079001 05-2010
4301 Sycamore Ridge Road
Hurricane, WV 25526
304-562-2611

Max Environnemental Technologies, Inc. Facility Permit # PAD004835146 / 301071
233 Max Lane
Yukon, PA 25968
724-722-3500

Max Environnemental Technologies, Inc. Facility Permit # PAD05087072 / 301359
200 Max Drive
Bulger, PA 15019
724-796-1571

Waste Management Kelly Run Permit # 100663
1901 Park Side Drive
Elizabeth, PA 15037
412-384-7569

Waste Management South Hills (Arnoni) Permit # 100592
3100 Hill Road
Library, PA 15129
724-348-7013
412-384-7569

Waste Management Arden Permit # 100172
200 Rangos Lane
Washington, PA 15301
724-222-3272

Waste Management Meadowfill Permit # 1032
1488 Dawson Drive
Bridgeport, WV 26330

Brooke County Landfill Permit # SWF-103-97 / WV 0109029
Rd 2 Box 410
Colliers, WV 26035
304-748-0014

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185
 Rt 1 Box 156A
 New Martinsville, WV 26035
 304-455-3800

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Energy Solutions, LLC Permit # UT 2300249
 423 West 300 South
 Suite 200
 Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-73006-L24
 1560 Bear Creek Road
 Oak Ridge, TN 37830

Northern A-1 Environmental Services Permit ID MID020906814
 3947 US 131 North, PO Box 1030
 Kalkaska, MI 49646
 231-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485
 3790 State Route 7
 New Waterford, OH 44445
 330-892-0164

CMS of Delaware Inc. DBA CMS Oilfield Serv
 301 Commerce Drive
 Moorestown, NJ 08057

Nabors Completion & Production Services Co.
 PO Box 975682
 Dallas, TX 75397-5682

Force, Inc.
 1380 Rte. 286 Hwy. E, Suite 303
 Indiana, PA 15701

Select Energy Services, LLC
 PO Box 203997
 Dallas, TX 75320-3997

Solo Construction
 P.O. Box 544
 St. Mary's, WV 26170

Nuverra Environmental Solutions
 11942 Veterans Memorial Highway
 Masontown, WV 26542

Equipment Transport
 1 Tyler Court
 Carlisle, PA 17015

Mustang Oilfield Services LLC
 PO Box 739
 St. Clairsville, OH 43950

Myers Well Service, Inc.
 2001 Ballpark Court
 Export, PA 15632

Wilson's Outdoor Services, LLC
 456 Cracraft Road
 Washington, PA 15301

Burns Drilling & Excavating
 618 Crabapple Road P.O. Box 41
 Wind Ridge, PA 15380

Disposal Locations:

Solidification
 Waste Management, Arden Landfill Permit # 100172
 200 Rangos Lane
 Washington, PA 15301
 724-225-1589

Nichlos 1-A (SWIW #13)
 Permit # 3862
 300 Cherrington Pkwy, Suite 200
 Coraopolis, PA 15108
 412-329-7275

Solidification/Incineration
 Soil Remediation, Inc. Permit # 02-20753
 6065 Arrel-Smith Road
 Lowelville, OH 44436
 330-536-6825

Groselle (SWIW #34)
 Permit # 4096
 Rt. 88
 Garrettsville, OH
 713-275-4816

Adams #1 (Buckeye Brine, LLC)
 Permit # 34-031-2-7177
 23986 Airport Road
 Coshocton, OH 43812
 740-575-4484
 512-478-6545

Kemble 1-D Well
 Permit # 8780
 7675 East Pike
 Norwich, Oh 43767
 614-648-8898
 740-796-6495

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Adams #2 (Buckeye Brine, LLC)
2205 Westover Road
Austin Tx 78703
Permit # 34-031-2-7178
740-575-4484
512-478-6545

Adams #3 (Buckeye Brine, LLC)
Permit #34-031-2-7241-00-00
2630 Exposition, Suite 117
Austin, TX 78703
512-478-6545

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5367 E. State Street
Newcomerstown, OH 43832
740-763-3966

Goff SWD #1 (SWIW # 27)
Permit # 34-119-2-8776-000
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-329-7275

SOS D#1 (SWIW #12)
Permit # 34-059-2-4202-00-00
Silcor Oilfield Services, Inc.
2939 Hubbard Road
Youngstown, PH 44505

Dudley #1 UIC (SWIW #1)
Permit # 34-121-2-2459-00-00
Select Energy Services, LLC
7994 S. Pleasants Hwy
St. Marys, WV 26170
304-665-2652

OH UIC #1 Buckeye UIC Barnesville 1 & 2
CNX Gas Company, LLC
1000 Consol Energy Drive
Permit # 34-013-2-0609-00-00
Permit # 34-013-2-0614-00-00
304-323-6568

01/18/2019

US Steele 11385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15730
304-323-6568

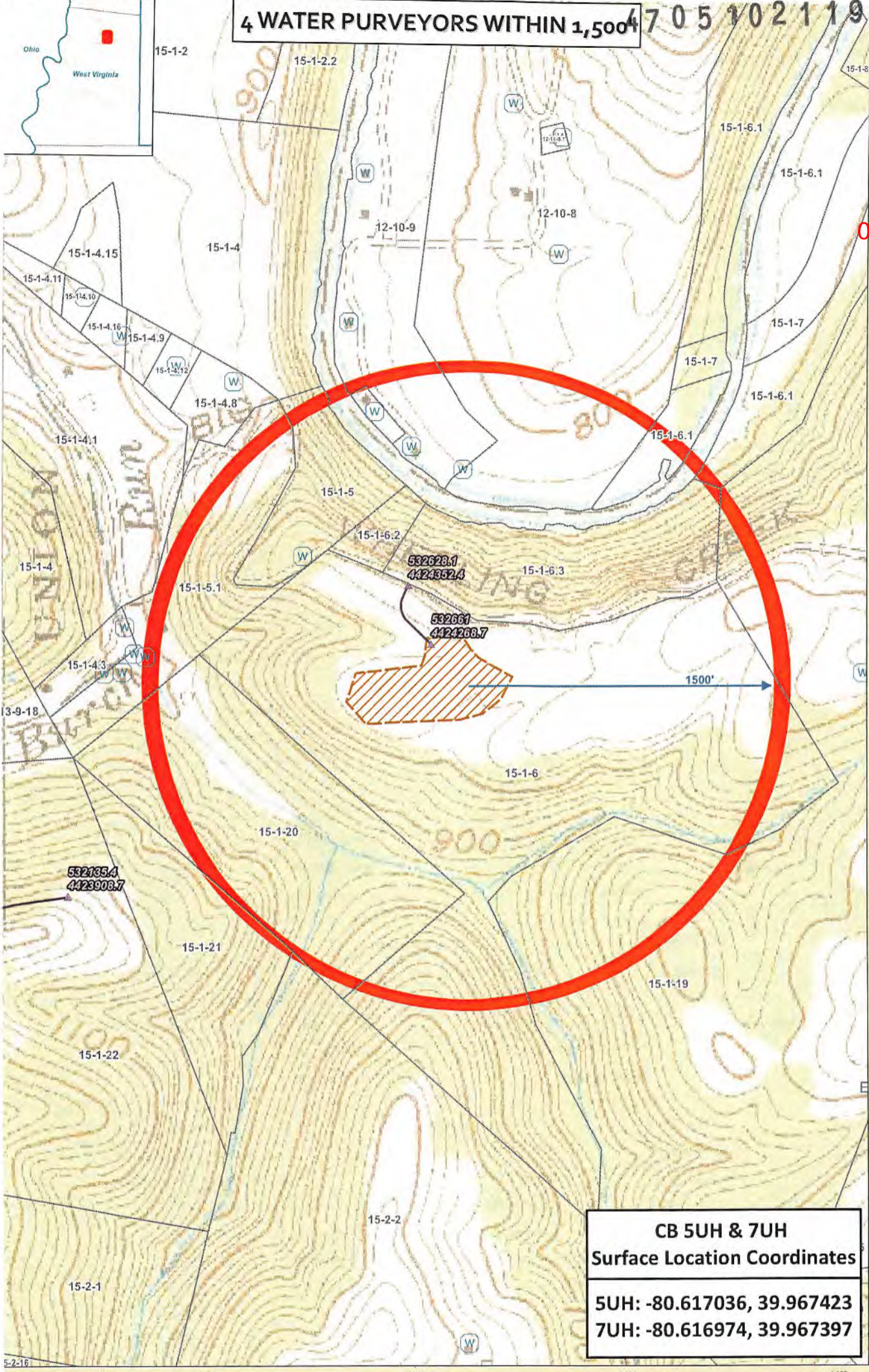
Chapin #7 UIC (SWIW #7)
Permit # 34-083-2-4137-00-00
Elkhead Gas& Oil Company
12163 Marne Rd. NE
Newark, OH 43055
740-763-3966

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4 WATER PURVEYORS WITHIN 1,500' 705 102119



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CB 5UH & 7UH
Surface Location Coordinates
5UH: -80.617036, 39.967423
7UH: -80.616974, 39.967397

CB 5UH & 7UH - Water Source

Marshall County West Virginia	Coordinate System: Coordinate System: NAD 1983 UTM Zone 17N Projection: Transverse Mercator Datum: North American 1983 Linear Units: Meter	Map Scale Units: 1:8,000 1 inch = 500 feet	Map Author: JKS Map Date: 8/14/2018	<ul style="list-style-type: none"> Well SHL Well Pad Access Rd Intersection Access Road Parcels 	<ul style="list-style-type: none"> Water Well 1,500' Buffer 	
----------------------------------	--	--	--	--	---	--

01/18/2019

4705102119



Site Safety Plan

**American Petroleum Partners Operating, LLC
Castle Black 7 UH Well Pad**

June 2018: Version 1

JW
8/23/18

**For Submission to
West Virginia Department of Environmental Protection,
Office of Oil and Gas**

American Petroleum Partners Operating, LLC

4600 J. Barry Ct

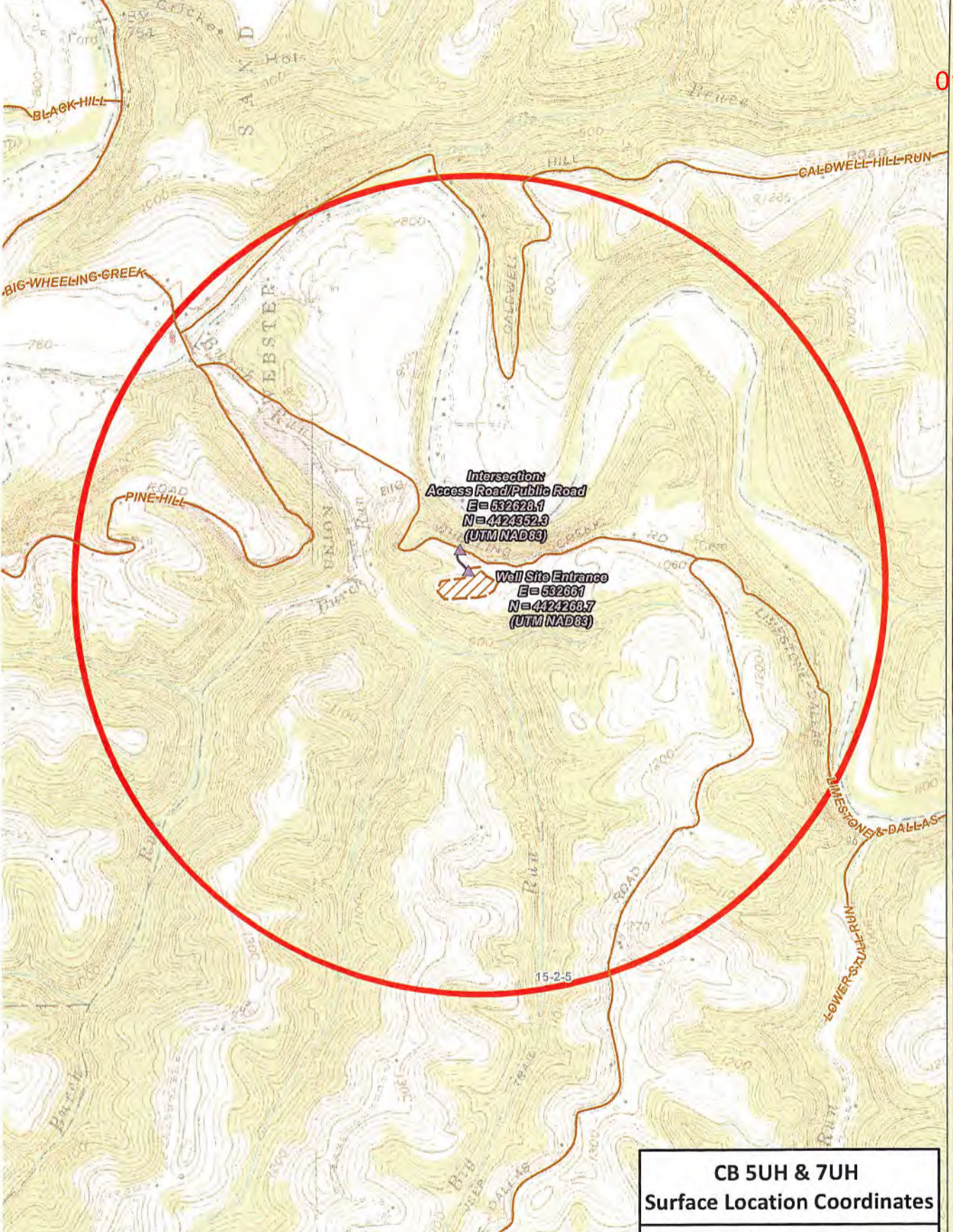
Suite 310

Canonsburg, PA 15317

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Environmental Protection



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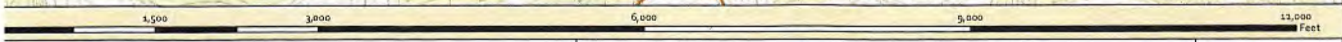
**Intersection:
Access Road/Public Road**
E=532628.1
N=4424352.3
(UTM NAD83)

Well Site Entrance
E=532661
N=4424268.7
(UTM NAD83)

**CB 5UH & 7UH
Surface Location Coordinates**

5UH: -80.617036, 39.967423
7UH: -80.616974, 39.967397

**Castle Black Drill Pad 911 Address:
6583 Big Wheeling Creek Rd, Moundsville, WV 26041**



CB 5UH & 7UH - Well Site

Marshall County
West Virginia

Coordinate System: NAD 1983 UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983
Linear Units: Meter

Map Scale Units:
1:18,000
1 inch = 1,500 feet

Map Author: JKS
Map Date: 8/2/2018

- Well SHL
- Well Pad
- 1 mile buffer
- Access Rd Intersection
- Access Road
- County Road



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Environmental Protection

SURFACE HOLE DEC. LONG: 80.617175
SURVEYED LONG: 80° 37' 01.8"

9,520'

Latitude: 40° 00' 00" (NAD27)

Latitude: 80° 35' 00" (NAD27)

WATER WELLS

- #1 N 50°47'06" W 983'
- #2 N 00°20'18" E 1019'
- #3 N 11°53'08" W 1154'
- #4 N 17°32'04" W 1359'

WELLS WITHIN 3000'

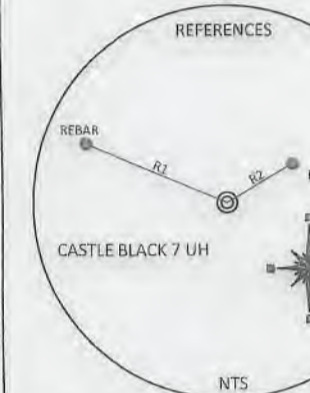
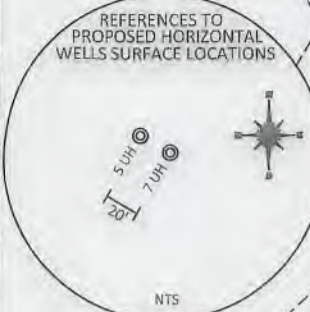
1 DEEP WELL WITHIN 3000'

LEGEND

- TOPO SURFACE HOLE
- TOPO BOTTOM HOLE
- PROPOSED WELL
- WATER SOURCE
- PERMIT
- LEASID NUMBER BASED ON ATTACHED WMSAT
- PROPOSED HORIZONTAL LATERAL
- SURFACE & MINERAL PARCEL BOUNDARY
- WELL PERMIT
- STREAM / WATERWAY
- UNIT BOUNDARY
- 3000' BUFFER
- FORCED POOLED PARCELS

LINE TABLE

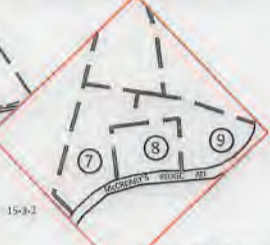
LINE	BEARING	DISTANCE
R1	N 67°27'29" W	457'
R2	N 60°14'09" E	229'
R3	N 69°58'44" E	1,302'
R4	S 75°00'51" E	718'
R5	N 82°23'48" W	1,272'



- NOTES:**
- There are no water wells or developed springs within 250' of proposed well. There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - 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 were provided by American Petroleum Partners Operating LLC.
 - Mineral and Surface parcel lines are the same.

SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION
UTM 17 - NAD83 N) 4424208.8 E) 532710.6	UTM 17 - NAD83 N) 4424089.8 E) 532801.9	UTM 17 - NAD83 N) 4422037.8 E) 534238.6
NAD27: WV NORTH N) 536386.2 E) 1686872.7	NAD27: WV NORTH N) 535990.5 E) 1687165.6	NAD27: WV NORTH N) 529178.1 E) 1691767.8
LAT/LON DATUM - NAD83 LAT: 39.967397 LONG: -80.616974	LAT/LON DATUM - NAD83 LAT: 39.966320 LONG: -80.615911	LAT/LON DATUM - NAD83 LAT: 39.947776 LONG: -80.599196

01/18/2019



DETAIL #1

TOTAL UNIT ACRES
390.91

FILE #: APP001
DRAWING #: 2823
SCALE: PLAT: 1" = 2000'
TICK: 1" = 2000'

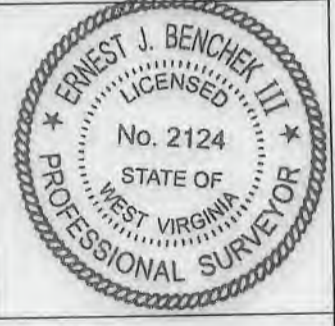
MINIMUM DEGREE OF ACCURACY: 1/200

PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]*

L.L.S. #2124: Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WYDEP

OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

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

WATERSHED: UPPER OHIO SOUTH

COUNTY/DISTRICT: MARSHALL / WEBSTER

SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC.

OIL & GAS ROYALTY OWNER: ECO-VRINDABAN, INC.

LEASE NUMBERS: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: POINT PLEASANT

WELL OPERATOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC
ADDRESS: 4600 J. BARRY COURT, SUITE 310
CITY: CANONSBURG STATE: PA ZIP CODE: 15317

DATE: AUGUST 29, 2018

OPERATOR'S WELL #: CASTLE BLACK 7 UH

API WELL #: 47 51 02119 H6A

STATE COUNTY PERMIT
PROPOSED ELEVATION: 1,041.65'
CURRENT ELEVATION: 1,044'

QUADRANGLE: MAJORSVILLE, WV

ACREAGE: 89.017 +/-

ACREAGE: 89.017 +/-

ESTIMATED DEPTH: TVD: 11,395' TMD: 19,954'

DESIGNATED AGENT: STEVEN GREEN
ADDRESS: 300 SUMMERS ST. SUITE 1000
CITY: CHARLESTON STATE: WV ZIP CODE: 25301

BOTTOM HOLE DEC. LONG: 80.599397
SURVEYED LONG: 80° 35' 57.8"

Latitude: 39° 57' 30" (NAD27)



01/18/2019

BHL



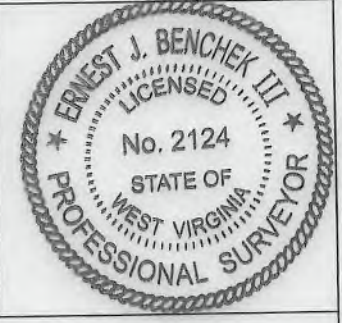
Longitude: 80° 35' 00" (NAD27)

4810'

BOTTOM HOLE DEC. LAT: 39.947701
SURVEYED LAT: 39° 56' 51.7"

FILE #: APP001
 DRAWING #: 2823
 SCALE: PLAT: 1" = 2000'
TICK: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]
 L.L.S. #2124: Ernest J. Benchek III



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

DATE: AUGUST 29, 2018

OPERATOR'S WELL #: CASTLE BLACK 7 UH

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

API WELL #: 47 51 02119 H6A
 STATE COUNTY PERMIT
 PROPOSED ELEVATION: 1,041.65'
 CURRENT ELEVATION: 1,044'

WATERSHED: UPPER OHIO SOUTH

COUNTY/DISTRICT: MARSHALL / WEBSTER
 SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC.

QUADRANGLE: MAJORSVILLE, WV

ACREAGE: 89.017 +/-

ACREAGE: 89.017 +/-

OIL & GAS ROYALTY OWNER: ECO-VRINDABAN, INC.

LEASE NUMBERS: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: POINT PLEASANT ESTIMATED DEPTH: TVD: 11,395' TMD: 19,954'

WELL OPERATOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC DESIGNATED AGENT: STEVEN GREEN

ADDRESS: 4600 J. BARRY COURT, SUITE 310 ADDRESS: 300 SUMMERS ST. SUITE 1000

CITY: CANONSBURG STATE: PA ZIP CODE: 15317 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

01/18/2019

1 TAX MAP NO. 15-1-6.3 ASSESSED AREA = 16.96 AC. SURFACE OWNERS: KENNETH L. MERINAR, JAMES M. MERINAR, JEFFREY T. MERINAR, & STANLEY J. MERINAR MINERAL OWNERS: GLENN M. HICKEY, CALVIN C. MERINAR, KENNETH L. MERINAR, JAMES M. MERINAR, JEFFREY T. MERINAR & STANLEY L. MERINAR

10 TAX MAP NO. 15-2-5.7 ASSESSED AREA = 5.86 AC. SURFACE OWNER: RAMESH & VINA PATEL MINERAL OWNER: RAMESH & VINA PATEL

18 TAX MAP NO. 15-3-27 ASSESSED AREA = 17.00 AC. SURFACE OWNER: James S. Shipley MINERAL OWNER: Lois Jean Zuesy Manger Enterprises LLC Monica R. Defelice Karen Sue Shipley Master Mineral Holdings I, LP Patrick William Shipley Paul E. & Debra J. Shipley Nancy C. Beckett Nyla J. Bell Charles W. & Sara Jane Likens Daniel L. & Karen A. Shipley Black Gold Group LTD Kenneth Wendell Oldfield Dianna Gallovitch Donald R. & Diane K. Reynolds Raymond L. Kachermeyer James W. & Erline M. Likens John R. & Sheereen S. McCabe Shane Aaron & Christina M. Muravsky Shirley May Bennington Star R. & Allan J. Duperior Suellen & Andy P. Cox Vemuri Home & Garden LLC Sara Jane Likens Life Estate, (Susan V. Chaney, Charlotte L. Gray, John R. McCabe, Nancy L. O. Bright Remaindermen) Keith J & Rachel E Burns Jane Driver-Lint Edward J. & Pamela Kachermeyer David J. Kachermeyer Orlan James Kachermeyer Brian K. & Shelley L. Kachermeyer Charlotte L. Gray Chad M. Simons Karen Kay Oldfield Patrick William Shipley

2 TAX MAP NO. 15-1-6 ASSESSED AREA = 89.01 AC. SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC. MINERAL OWNER: ECO-VRINDABAN, INC.

11 TAX MAP NO. 15-2-12.11 ASSESSED AREA = 6.174 AC. SURFACE OWNER: VRINDA CLOTHIER MINERAL OWNER: Vrinda D. Clothier & Christopher L. Harkness as JTWRDS Vrinda Clothier

3 TAX MAP NO. 15-1-19 ASSESSED AREA = 151.50 AC. SURFACE OWNER: BETTY CECIL ROSE, TRUSTEE MINERAL OWNER: BOUNTY MINERALS, LLC

12 TAX MAP NO. 15-2-12.6 ASSESSED AREA = 4.499 AC. SURFACE OWNER: GELDA ORTEGA MINERAL OWNER: GELDA ORTEGA

4 TAX MAP NO. 15-1-16 ASSESSED AREA = 99.081 AC. SURFACE OWNER: ISKCON, NEW MATHURA VRINDABAN MINERAL OWNER: ISKCON NEW VRINDABAN INC.

13 TAX MAP NO. 15-2-12.9 ASSESSED AREA = 6.324 AC. SURFACE OWNER: ANAATA RAMKAREE GAFFOOR & VANESSA GAFFOOR MINERAL OWNER: THERESA MARIE LINERODE

5 TAX MAP NO. 15-2-3.8 ASSESSED AREA = 13.30 AC. SURFACE OWNER: SHAM GAFOOR & VIDYA RAMKAREE MINERAL OWNER: SHAM SHADEEN & VIDYA GAFOOR; RAMKAREE

14 TAX MAP NO. 15-3-29 ASSESSED AREA = 2.000 AC. SURFACE OWNER: ALBERT COFFIELD MINERAL OWNER: Heirs of Albert Coffield (Robert W. Coffield)

6 TAX MAP NO. 15-2-3.9 ASSESSED AREA = 11.82 AC. SURFACE OWNER: Elicia Heller MINERAL OWNER: Elicia N. Heller

15 TAX MAP NO. 15-2-3.5 ASSESSED AREA = 44.88 AC. SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC. MINERAL OWNER: ECO - Vrindaban, Inc.

19 TAX MAP NO. 15-3-26 ASSESSED AREA = 8.00 AC. SURFACE OWNER: James S. Shipley MINERAL OWNER: Manger Enterprises LLC Master Mineral Holdings I, LP Monica R. Defelice Nyla J. Bell Paul E. & Debra J. Shipley James W. & Erline M. Likens Shirley May Bennington Chad M. Simons Karen Kay Oldfield Kenneth Wendell Oldfield Black Gold Group LTD Charles W. & Sara Jane Likens Daniel L. & Karen A. Shipley Donald R. & Diane K. Reynolds Raymond L. Kachermeyer Dianna Gallovitch Karen Sue Shipley Patrick William Shipley Star R. & Allan J. Duperior Shane Aaron & Christina M. Muravsky Vemuri Home & Garden LLC Sara Jane Likens Life Estate, (Susan V. Chaney, Charlotte L. Gray, John R. McCabe, Nancy L. O. Bright Remaindermen) Keith J & Rachel E Burns Jane Driver-Lint Edward J. & Pamela Kachermeyer David J. Kachermeyer Orlan James Kachermeyer Brian K. & Shelley L. Kachermeyer Charlotte L. Gray John R. & Sheereen S. McCabe Lois Jean Zuesy Nancy C. Beckett Suellen & Andy P. Cox Patrick William Shipley

7 TAX MAP NO. 15-2-3.7 ASSESSED AREA = 0.435 AC. SURFACE OWNER: Andy & Ruth Fraenkel MINERAL OWNER: Andy & Ruth Fraenkel

16 TAX MAP NO. 15-2-5 ASSESSED AREA = 113.88 AC. SURFACE OWNER: ISKCON NEW MATHURA VRINDABAN MINERAL OWNER: ISKCON NEW VRINDABAN INC.

8 TAX MAP NO. 15-2-3.2 ASSESSED AREA = 0.292 AC. SURFACE OWNER: Andy & Ruth Fraenkel MINERAL OWNER: Andy & Ruth Fraenkel

17 TAX MAP NO. 15-2-4 ASSESSED AREA = 116.89 AC. SURFACE OWNER: Sara Jo. Anderson MINERAL OWNER: Bounty Minerals, LLC

9 TAX MAP NO. 15-2-3.4 ASSESSED AREA = 0.453 AC. SURFACE OWNER: Andy & Ruth Fraenkel MINERAL OWNER: Andy & Ruth Fraenkel

20 TAX MAP NO. 15-3-28 ASSESSED AREA = 7.68 AC. SURFACE OWNER: Jasper N. Givens MINERAL OWNER: Heirs of Jasper Givens (Robert W. Coffield)

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

DATE: AUGUST 29, 2018

OPERATOR'S WELL #: CASTLE BLACK 7 UH

API WELL #: 47 51 02119 H6A STATE COUNTY PERMIT

PROPOSED ELEVATION: 1,041.65' CURRENT ELEVATION: 1,044'

QUADRANGLE: MAJORSVILLE, WV

ACREAGE: 89.017 +/-

ACREAGE: 89.017 +/-

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

WATERSHED: UPPER OHIO SOUTH

COUNTY/DISTRICT: MARSHALL / WEBSTER SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC.

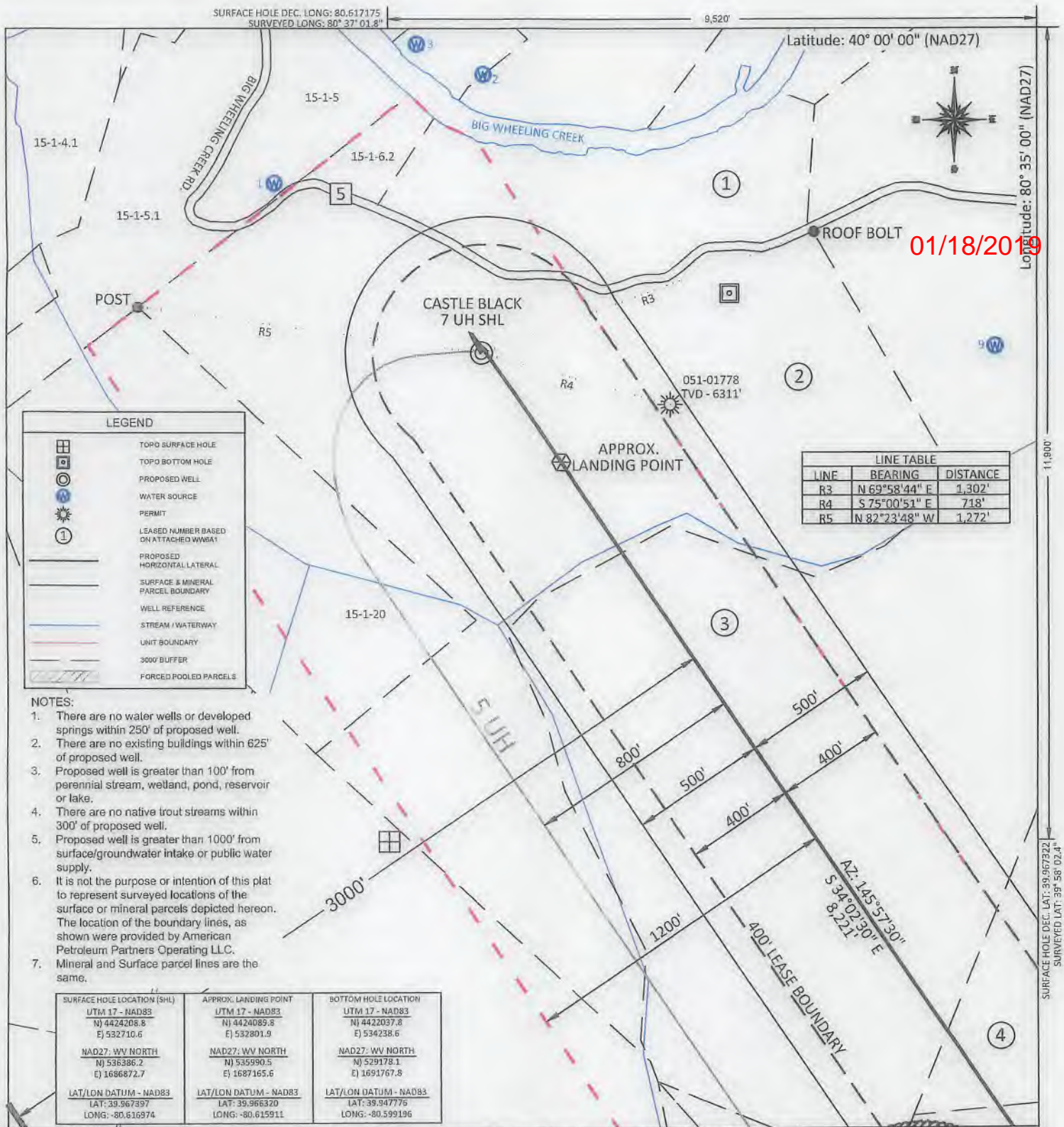
OIL & GAS ROYALTY OWNER: ECO-VRINDABAN, INC.

LEASE NUMBERS: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: POINT PLEASANT ESTIMATED DEPTH: TVD: 11,395' TMD: 19,954'

WELL OPERATOR: AMERICAN PETROLEUM PARTNERS OPERATING, LLC DESIGNATED AGENT: STEVEN GREEN

ADDRESS: 4600 J. BARRY COURT, SUITE 310 ADDRESS: 300 SUMMERS ST. SUITE 1000 CITY: CANONSBURG STATE: PA ZIP CODE: 15317 CITY: CHARLESTON STATE: WV ZIP CODE: 25301



01/18/2019

FILE #: APP001
 DRAWING #: 2823
 SCALE: PLAT: 1" = 500'
 TICK: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]*
 L.L.S. #2124 Ernest J. Benchek III



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

DATE: AUGUST 29, 2018
 OPERATOR'S WELL #: CASTLE BLACK 7 UH
 API WELL #: 47 51 02119 HGA
 STATE COUNTY PERMIT
 PROPOSED ELEVATION: 1,041.65'
 CURRENT ELEVATION: 1,044'

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

WATERSHED: UPPER OHIO SOUTH
 COUNTY/DISTRICT: MARSHALL / WEBSTER
 SURFACE OWNER: ECO-VRINDABAN, INC., DBA GORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC.
 OIL & GAS ROYALTY OWNER: ECO-VRINDABAN, INC.
 LEASE NUMBERS: _____

QUADRANGLE: MAJORSVILLE, WV
 ACREAGE: 89.017 +/-
 ACREAGE: 89.017 +/-

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
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TARGET FORMATION: POINT PLEASANT
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 ADDRESS: 4600 J. BARRY COURT, SUITE 310
 CITY: CANONSBURG STATE: PA ZIP CODE: 15317
 DESIGNATED AGENT: STEVEN GREEN
 ADDRESS: 300 SUMMERS ST. SUITE 1000
 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

SURFACE HOLE DEC. LONG: 80.617175
SURVEYED LONG: 80° 37' 01.8"

9,620'

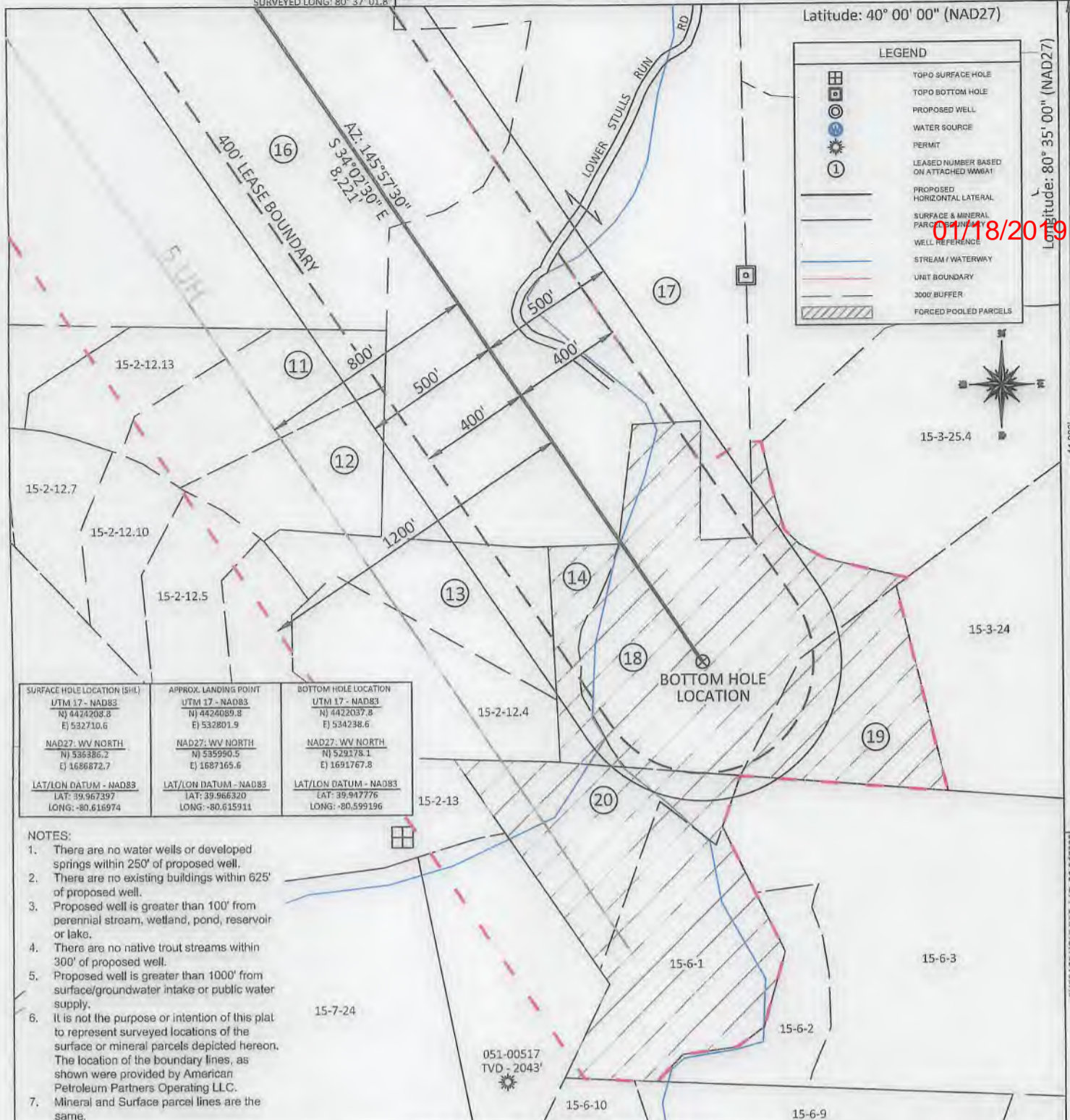
Latitude: 40° 00' 00" (NAD27)

Longitude: 80° 35' 00" (NAD27)

LEGEND

- TOPO SURFACE HOLE
- TOPO BOTTOM HOLE
- PROPOSED WELL
- WATER SOURCE
- PERMIT
- LEASED NUMBER BASED ON ATTACHED WWBAT
- PROPOSED HORIZONTAL LATERAL
- SURFACE & MINERAL PARCEL BOUNDARY
- WELL REFERENCE
- STREAM / WATERWAY
- UNIT BOUNDARY
- 300' BUFFER
- FORCED POOLED PARCELS

01/18/2019



SURFACE HOLE LOCATION (SHL)	APPROX. LANDING POINT	BOTTOM HOLE LOCATION
UTM 17 - NAD83 N) 4424208.8 E) 532710.6	UTM 17 - NAD83 N) 4424089.8 E) 532801.9	UTM 17 - NAD83 N) 4422037.8 E) 534238.6
NAD27: WV NORTH N) 536386.2 E) 1686872.7	NAD27: WV NORTH N) 535990.5 E) 1687169.6	NAD27: WV NORTH N) 529178.1 E) 1691767.8
LAT/LON DATUM - NAD83 LAT: 39.967397 LONG: -80.616974	LAT/LON DATUM - NAD83 LAT: 39.966320 LONG: -80.615911	LAT/LON DATUM - NAD83 LAT: 39.947776 LONG: -80.599196

- NOTES:**
1. There are no water wells or developed springs within 250' of proposed well.
 2. There are no existing buildings within 625' of proposed well.
 3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 4. There are no native trout streams within 300' of proposed well.
 5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 6. 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 were provided by American Petroleum Partners Operating LLC.
 7. Mineral and Surface parcel lines are the same.

FILE #: APP001
DRAWING #: 2823
SCALE: PLAT: 1" = 500'
TICK: 1" = 2000'

MINIMUM DEGREE OF ACCURACY: 1/200

PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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]*

L.L.S. #2124 : Ernest J. Benchek III



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

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

WATERSHED: UPPER OHIO SOUTH

COUNTY/DISTRICT: MARSHALL / WEBSTER

SURFACE OWNER: ECO-VRINDABAN, INC., DBA CORAKSHYA-SEVA & ENVIRONMENTAL EDUCATION TRUST OF AMERICA, INC.

OIL & GAS ROYALTY OWNER: ECO-VRINDABAN, INC.

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API WELL #: 47 51 02119H6A

STATE COUNTY PERMIT

PROPOSED ELEVATION: 1,041.65'

CURRENT ELEVATION: 1,044'

QUADRANGLE: MAJORSVILLE, WV

ACREAGE: 89.017 +/-

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ESTIMATED DEPTH: TVD: 11,395' TMD: 19,954'

DESIGNATED AGENT: STEVEN GREEN ADDRESS: 300 SUMMERS ST. SUITE 1000 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

WW-6A1
(5/13)

Operator's Well No. Castle Black-7UH

**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
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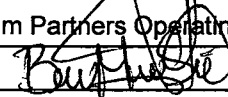
See attached sheet

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

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

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

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

Well Operator: American Petroleum Partners Operating, LLC
 By: Braulio Silva 
 Its: Vice President-Drilling

CBSW 7UH Wellbore Tracts

Map#	Lease#	Lessor	Current Lessee	Royalty	Recording Information	Parcel
2	WV-MAR-0083	Eco-Vrindaban Inc.	American Petroleum Partners Operating, LLC	Not Less than 1/8th	827/144	15-1-6 ✓
3	WV-MAR-1254	Tatia Josephine Rose	American Petroleum Partners Operating, LLC	Not Less than 1/8th	820/167	15-1-19 ✓
4	WV-MAR-0080	ISKCON New Vrindaban, Inc.	American Petroleum Partners Operating, LLC	Not Less than 1/8th	827-480	15-1-16 ✓
6	WV-MAR-0018	Elicia N. Heller aka Elicia Heller Sheldon	American Petroleum Partners Operating, LLC	Not Less than 1/8th	825/588	15-2-3.9 ✓
15	WV-MAR-0073	ECO-Vrindaban, Inc.	American Petroleum Partners Operating, LLC	Not Less than 1/8th	827/144	15-2-3.5 ✓
16	WV-MAR-0080	ISKCON New Vrindaban, Inc.	American Petroleum Partners Operating, LLC	Not Less than 1/8th	827/480	15-2-5 ✓
17	WV-MAR-0519	Sara Jo Anderson	American Petroleum Partners Operating, LLC	Not Less than 1/8th	696/242	15-2-4 ✓
18	WV-MAR-1035	David J. Kachermeyer	American Petroleum Partners Operating, LLC	Not Less than 1/8th	969-526	15-3-27 ✓
18	WV-MAR-1114	Black Gold Group LTD	American Petroleum Partners Operating, LLC	Not Less than 1/8th	979-275	15-3-27 ✓
18	WV-MAR-1133	Brian K. Kachermeyer	American Petroleum Partners Operating, LLC	Not Less than 1/8th	979-30	15-3-27 ✓
18	WV-MAR-1037	Chad M. Simons	American Petroleum Partners Operating, LLC	Not Less than 1/8th	969-548	15-3-27 ✓
18	WV-MAR-0298	Charles W. Likens & Sara Jane Likens	American Petroleum Partners Operating, LLC	Not Less than 1/8th	914-413	15-3-27 ✓
18	WV-MAR-0321	Charlotte L. Gray, Remainderman	American Petroleum Partners Operating, LLC	Not Less than 1/8th	916-75	15-3-27 ✓
18	WV-MAR-0260	Daniel L. Shipley & Karen A. Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	912-591	15-3-27 ✓

512015

6112015

51129-15

18	WV-MAR-0529	Dianna Gallovitch	American Petroleum Partners Operating, LLC	Not Less than 1/8th	938-74	15-3-27
18	WV-MAR-0386	Donald R. Reynolds and Diane K. Reynolds	American Petroleum Partners Operating, LLC	Not Less than 1/8th	927-331	15-3-27
18	WV-MAR-1065	Edward J. & Pamela Kachermeyer	American Petroleum Partners Operating, LLC	Not Less than 1/8th	976-499	15-3-27
18	WV-MAR-0405	George S. Kimberly	American Petroleum Partners Operating, LLC	Not Less than 1/8th	929-174	15-3-27
18	WV-MAR-0320	James W. Likens & Erline M. Likens	American Petroleum Partners Operating, LLC	Not Less than 1/8th	916-78	15-3-27
18	WV-MAR-0988	Jane Driver-Lint & Timothy C. Lint	American Petroleum Partners Operating, LLC	Not Less than 1/8th	965-400	15-3-27
18	WV-MAR-0324	John R. & Sheereen S. McCabe	American Petroleum Partners Operating, LLC	Not Less than 1/8th	917-17	15-3-27
18	WV-MAR-0373	Karen Kay Oldfield	American Petroleum Partners Operating, LLC	Not Less than 1/8th	926-109	15-3-27
18	WV-MAR-0531	Karen Sue Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	939-578	15-3-27
18	WV-MAR-1045	Keith J & Rachel E Burns	American Petroleum Partners Operating, LLC	Not Less than 1/8th	973-373	15-3-27
18	WV-MAR-1128	Lois Jean Zuesy	American Petroleum Partners Operating, LLC	Not Less than 1/8th	837-40	15-3-27
18	WV-MAR-1230	Lois Jean Zuesy (Remainderman)	American Petroleum Partners Operating, LLC	Not Less than 1/8th	837-35	15-3-27
18		Manger Enterprises LLC	Manger Enterprises LLC	Not Less than 1/8th		15-3-27
18	WV-MAR-0275	Master Mineral Holdings I, LP, by and through its General Partner PBEX Resources, LLC	American Petroleum Partners Operating, LLC	Not Less than 1/8th	914-132	15-3-27
18		Monica R. Defelice	Monica R. Defelice	Not Less than 1/8th		15-3-27
18	WV-MAR-0259	Nancy C. Beckett	American Petroleum Partners Operating, LLC	Not Less than 1/8th	912-594	15-3-27

51-02119

18	Pending	Nellie C. Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	837-40	15-3-27
18	WV-MAR-0365	Nyla J. Bell	American Petroleum Partners Operating, LLC	Not Less than 1/8th	924-225	15-3-27
18	WV-MAR-1030	Orlan James Kachermeyer	American Petroleum Partners Operating, LLC	Not Less than 1/8th	968-68	15-3-27
18	WV-MAR-1122	Patrick William Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	839-281	15-3-27
18	WV-MAR-0479	Patrick William Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	934-329	15-3-27
18	WV-MAR-0270	Paul E. Shipley & Debra J. Shipley	American Petroleum Partners Operating, LLC	Not Less than 1/8th	912-601	15-3-27
18	WV-MAR-0517	Raymond L. Kachermeyer	American Petroleum Partners Operating, LLC	Not Less than 1/8th	972-511	15-3-27
18		Sara Jane Likens Life Estate, (Susan V. Chaney, Charlotte L Gray, John R McCabe, Nancy L OBright Remaindermen)	Sara Jane Likens Life Estate, (Susan V. Chaney, Charlotte L Gray, John R McCabe, Nancy L OBright Remaindermen)	Not Less than 1/8th		15-3-27
18	WV-MAR-0518	Shane Aaron Muravsky and Christina M. Muravsky	American Petroleum Partners Operating, LLC	Not Less than 1/8th	942-248	15-3-27
18		Shirley May Bennington	Shirley May Bennington	Not Less than 1/8th		15-3-27
18	WV-MAR-0516	Star R. & Allan J. Duperior	American Petroleum Partners Operating, LLC	Not Less than 1/8th	942-244	15-3-27
18	WV-MAR-0284	Suellen & Andy P. Cox	American Petroleum Partners Operating, LLC	Not Less than 1/8th	914-7	15-3-27
18	WV-MAR-0530	Venmuri Home & Garden LLC	American Petroleum Partners Operating, LLC	Not Less than 1/8th	939-582	15-3-27

Note: The parcel that says pending (15-3-27 - Nellie C. Shipley) was acquired in a trade from another operator (the assignment is recorded in Marshall County Courthouse). Internally it hasn't been assigned a Lease No. yet that is why it is listed as pending. Attempts were made on 15-3-26 & 15-3-27 to contact and verify owners to sign leases.



Office of Oil & Gas
601 57th street, SE
Charleston, WV 25304-2345

August 22, 2018

Re: Drilling Under Roads

To Whom It May Concern:

American Petroleum Partners Operating has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or desire additional information, please do not hesitate to contact me at regulatory@app-lp.com or 724-338-8629.

Sincerely,

Braulio Silva
Vice-President, Drilling

BS/djs

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Office of Oil and Gas
AUG 29 2018
WV Department of
Environmental Protection

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

Date of Notice Certification 8/24/2018

API No. 47- 051 -
Operator's Well No. Castle Black-7UH
Well Pad Name: Castle Black

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>532710.594</u>
County:	<u>Marshall</u>		Northing:	<u>4424208.803</u>
District:	<u>Webster</u>	Public Road Access:	<u>Big Wheeling Creek Road</u>	
Quadrangle:	<u>Majorsville</u>	Generally used farm name:	<u>Geeta</u>	
Watershed:	<u>Upper Ohio South</u>			

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

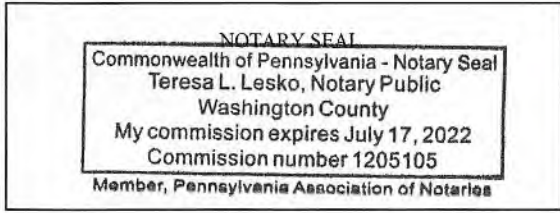
Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
RECEIVED Office of Oil and Gas AUG 29 2018 WV Department of Environmental Protection		

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

Certification of Notice is hereby given:

THEREFORE, I Braulio Silva, 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:	<u>American Petroleum Partners Operating, LLC</u>	Address:	<u>4600 J. Barry Court Suite 310</u>
By:	<u>Braulio Silva</u>		<u>Canonsburg, PA 15317</u>
Its:	<u>Vice President-Drilling</u>	Facsimile:	<u>na</u>
Telephone:	<u>1-844-835-5277</u>	Email:	<u>Regulatory@app-lp.com</u>



Subscribed and sworn before me this 24th day of August, 2018
Teresa L. Lesko Notary Public
 My Commission Expires 7-17-2022

Oil and Gas Privacy Notice:

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

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AUG 29 2018

WV Department of
Environmental Protection

**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: 8/29/18 **Date Permit Application Filed:** 8/29/18

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: ECO-Vrindiban, Inc. (Geeta)
Address: Rd 3 Box 278 B
Wheeling, WV 26003

Name: _____
Address: _____

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

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: None
Address: _____

COAL OWNER OR LESSEE

Name: Murray American Energy and Consolidation Coal Company
Address: 46226 National Road
St. Clairsville, OH 43950

COAL OPERATOR

Name: The Ohio County Mine-Murray American Energy and Consolidation Coal Company
Address: 46226 National Road
St. Clairsville, OH 43950

SURFACE OWNER OF WATER WELL

AND/OR WATER PURVEYOR(s)
Name: * See attached sheet.
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: None
Address: _____

*Please attach additional forms if necessary

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AUG 29 2018
WV Department of
Environmental Protection

01/18/2019

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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 to the location or construction of the applicant's proposed well work to the Secretary at:

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

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Office of Oil and Gas

AUG 29 2018

WV Department of
Environmental Protection

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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Environmental Protection

WW-6A
(8-13)

API NO. 47- 051 - 0249
OPERATOR WELL NO. Castle Black-701 **01/18/2019**
Well Pad Name: Castle Black

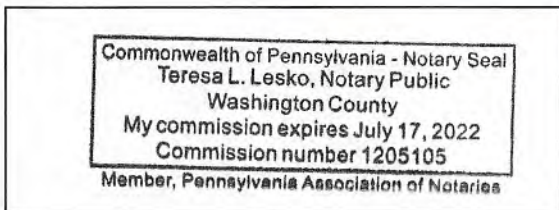
Notice is hereby given by:

Well Operator: American Petroleum Partners Operating, LLC
Telephone: 1-844-835-5277
Email: Regulatory@APP-LP.com

Address: 4600 J. Barry Court, Suite 310
Canonsburg, PA 15317
Facsimile: na

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 24th day of August, 2018
Teresa L. Lesko Notary Public
My Commission Expires 7-17-2022

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WV Department of
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Water Purveyors within 1500'

✓ **Glenn M. Hickey**

Rd 3 Box 171

Wheeling, WV 26003

✓ **Kenneth L. Merinar Et Al**

310 Schrader Ave

Wheeling, WV 26003

✓ **Stanley L. Merinar Et Ux**

RR Box 173

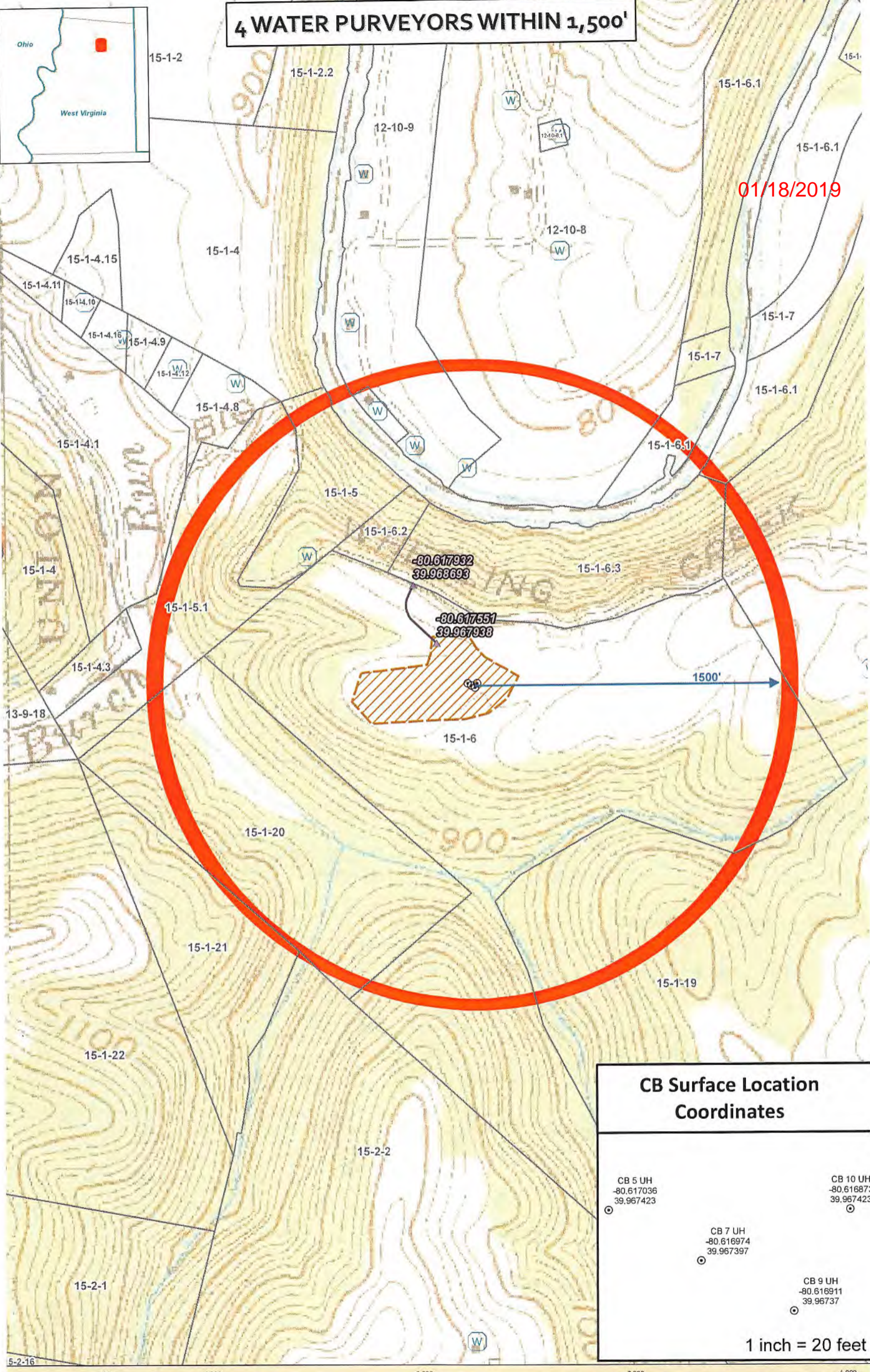
Wheeling, WV 26003

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4 WATER PURVEYORS WITHIN 1,500'

SI-00119

01/18/2019



CB Surface Location Coordinates	
CB 5 UH -80.617036 39.967423	CB 10 UH -80.616873 39.967423
CB 7 UH -80.616974 39.967397	
CB 9 UH -80.616911 39.96737	

1 inch = 20 feet

Castle Black - Water Source

Marshall County West Virginia
 Coordinate System: NAD 1983 UTM Zone 18N
 Projection: Transverse Mercator
 Datum: North American 1983
 Map Scale Units: 1:6,000
 1 inch = 600 feet
 Map Author: JKS
 Map Date: 1/30/2018

- Well SHL
- Well Pad
- Access Rd Intersection
- Access Road
- Water Well
- 1,500' Buffer
- Parcels

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

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

Date of Notice: 12/15/2016 **Date of Planned Entry:** 12/26/2016

01/18/2019

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: ECO-Vrindban, Inc.
Address: RD 3 Box 278B
Wheeling, WV 26003
Name: _____
Address: _____
Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

MINERAL OWNER(s)

Name: ECO-Vrindban, Inc.
Address: RD 3 Box 278B
Wheeling, WV 26003
*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>N 39.967272 W -80.617565</u>
County: <u>Marshall</u>	Public Road Access: <u>Big Wheeling Creek Road</u>
District: <u>Sand Hill</u>	Watershed: <u>Grandstaff Run - Wheeling Creek</u>
Quadrangle: <u>Marjorsville NW</u>	Generally used farm name: <u>GEETA</u>

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

Notice is hereby given by:

Well Operator: <u>American Petroleum Partners Operating LLC</u>	Address: <u>380 Southpointe Blvd, Suite 120</u>
Telephone: <u>844-TELL-APP</u>	<u>Canonsburg, PA 15317</u>
Email: <u>bslva@app-llp.com</u>	Facsimile: _____

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 12/15/2016 **Date of Planned Entry:** 12/26/2016

01/18/2019

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Murray Energy - ATTN: Alex O'Neill
Address: 46226 National Road
Saint Clairsville, OH 43950

MINERAL OWNER(s)

Name: _____
Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>N 39.967272 W -80.617565</u>
County: <u>Marshall</u>	Public Road Access: <u>Big Wheeling Creek Road</u>
District: <u>Sand Hill</u>	Watershed: <u>Grandstaff Run - Wheeling Creek</u>
Quadrangle: <u>Marjorsville NW</u>	Generally used farm name: <u>GEETA</u>

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

Notice is hereby given by:

Well Operator: <u>American Petroleum Partners Operating LLC</u>	Address: <u>380 Southpointe Blvd, Suite 120</u>
Telephone: <u>844-TELL-APP</u>	<u>Canonsburg, PA 15317</u>
Email: <u>bsilva@app-lp.com</u>	Facsimile: _____

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 8/24/18 **Date Permit Application Filed:** 8/29/18

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: ECO-Vrindiban, Inc. (Geeta)
Address: Rd 3 Box 278 B
Wheeling, WV 26003

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>532710.594</u>
County: <u>Marshall</u>		Northing: <u>4424208.803</u>
District: <u>Webster</u>	Public Road Access: <u>Big Wheeling Creek Road</u>	
Quadrangle: <u>Majorsville</u>	Generally used farm name: <u>Geeta</u>	
Watershed: <u>Upper Ohio South</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: American Petroleum Partners Operating, LLC
Telephone: 1-844-835-5277
Email: Regulatory@app-lp.com

Address: 4600 J. Barry Court Suite 310
Canonsburg, PA 15317
Facsimile: na

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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.

4705 01/18/2019
702119

AGREEMENT
FOR
COAL WAIVER AND CONDITIONAL DRILLING ACTIVITY

This Agreement, effective this 16th day of February, 2017, by and between, CONSOLIDATION COAL COMPANY, a Delaware Corporation, and Murray American Energy, Inc., a Delaware Corporation, both of whose mailing address is 46226 National Road, St. Clairsville, OH 43905, hereinafter collectively referred to as "COMPANY,"

A N D

AMERICAN PETROLEUM PARTNERS OPERATING, LLC, a Delaware limited liability company, having a place of business at 380 Southpointe Blvd., Suite 120, Canonsburg, PA 15317, hereinafter referred to as "APP."

PREAMBLE

WHEREAS, APP intends to apply to the West Virginia Department of Environmental Protection for a permit to drill gas wells listed in Table 1 on the pad known as the CASTLE BLACK wells at a location in _____ District, Marshall County, West Virginia; and **WEBSTER**

WHEREAS, COMPANY through itself and/or any one or more of its affiliates, owns or controls the Pittsburgh #8 seam of coal at the proposed location of the proposed CASTLE BLACK wells and said wells when drilled will penetrate the Pittsburgh #8 seam of coal; and

WHEREAS, APP has a regulatory obligation and responsibility to notify coal seam owners of its intent to drill and develop oil/gas wells through such coal seams; and

WHEREAS, APP has requested COMPANY to sign a WW-6AW Voluntary Statement of No Objection form, which COMPANY is willing to sign subject to the conditions set forth in this agreement.

NOW, THEREFORE, in consideration of the commitments set forth herein and intending to be legally bound hereby the parties do hereby agree as follows:

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1. The approved surface locations of the proposed CASTLE BLACK wells are listed in Table 1 in WV State Plane North NAD 27 coordinate system. The CASTLE BLACK wells shall only be drilled at these surface locations.

Table 1: Well Locations

	Well Name	Northing	Easting
(1UH)	CASTLE BLACK A-HU	536415.972	1686820.615
(2UH)	CASTLE BLACK B-HU	536435.071	1686831.533
(3UH)	CASTLE BLACK C-HU	536406.046	1686837.978
(4UH)	CASTLE BLACK D-HU	536425.145	1686848.896
(5UH)	CASTLE BLACK E-HU	536396.119	1686855.341
(6UH)	CASTLE BLACK F-HU	536415.219	1686866.259
(7UH)	CASTLE BLACK G-HU	536386.193	1686872.703
(8UH)	CASTLE BLACK H-HU	536405.292	1686883.621
(9UH)	CASTLE BLACK I-HU	536376.267	1686890.066
(10UH)	CASTLE BLACK J-HU	536395.366	1686900.984

2. The proposed CASTLE BLACK wells are located in an existing perimeter barrier and proposed interior barrier of the active Shoemaker Mine. Hence, the drilling of the proposed CASTLE BLACK wells shall strictly follow the procedures set forth in the Agreement.
3. COMPANY shall develop procedures and submit well protection pillar permit applications to the applicable coal mining regulatory authorities to secure approval to drill the proposed CASTLE BLACK near, around, or adjacent to existing mine workings. COMPANY will design the protection pillar to provide a minimum coal barrier of fifty feet (50') from its existing underground mining activities to the location of the active CASTLE BLACK wells within the Pittsburgh #8 coal seam.
4. COMPANY shall provide APP with a copy of the procedures and well protection pillar permit applications for APP's review prior to submittal to the applicable coal mining regulatory agencies.
5. Once all the required approvals are received to drill the proposed CASTLE BLACK wells near, around, or adjacent to the existing mine workings, APP

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may proceed with the drilling of CASTLE BLACK wells in accordance to the procedures and requirements of this Agreement, provided that APP shall also comply with any and all requirements applicable to APP imposed by the coal mining regulatory agencies within the approvals.

6. APP agrees that if a coal mining regulatory agency does not approve the proposed well protection pillar permit or the procedures and plans to drill the proposed CASTLE BLACK wells near, around or adjacent to the existing mine workings, this Agreement is voided and is no longer in effect and COMPANY rescinds its consent to drill the CASTLE BLACK wells.
7. APP shall provide COMPANY with written notification at least two (2) weeks prior to the commencement of well drilling activities to provide sufficient time for COMPANY to verify and approve the surveyed location of the proposed wells. APP and COMPANY shall maintain continued communication during the well drilling process.
8. Once the surveyed surface location is verified, APP may drill from the surface pad to a depth no closer than twenty feet (20') from the top of the Pittsburgh #8 coal seam.
9. APP shall then, at its expense, have a well deviation survey conducted in the well boring from the surface to the drilled depth approximately twenty feet (20') above the Pittsburgh #8 coal seam and shall promptly provide the certified results of the deviation survey to COMPANY. The well shall be limited to a total deviation not to exceed one percent (1%) to assure the well boring will penetrate through the Pittsburgh #8 coal seam within the area approved by the coal mining regulatory agencies.
10. APP shall use water, water sprays, drilling soap or other approved drilling fluids while drilling after the surface casing is installed through the Pittsburgh #8 coal seam and continue drilling with fluids until the steel coal protection casing is effectively installed and cemented in place below the Pittsburgh #8 coal seam in accordance with all rules, regulations, and approvals for the drilling operation.
11. If the drilled well boring is less than or equal to the required one percent (1%) maximum deviation, APP may proceed with its planned drilling activities in accordance to all applicable laws and regulations. APP and COMPANY shall continue to maintain communication through the completion of the well drilling and installation processes.
12. If the well boring deviation exceeds one percent (1%), APP may elect to take measures within the well boring above the coal seam to correct the well drilling deviation to assure the well boring will penetrate through the Pittsburgh #8 coal seam within the required one percent (1%) deviation area. If APP is unable to make the necessary corrections to limit the well deviation to one percent (1%), APP shall cease drilling activities and, at its expense, grout the well boring completely from the bottom of the well

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- boring to the surface using approved procedures to assure a uniform and complete sealing of the drilled well boring.
13. APP shall immediately provide all records and certified results of the deviation surveys to COMPANY.
 14. COMPANY plans to mine its coal reserve utilizing full extraction techniques to fully mine and remove the entire coal seam in those areas where such mining is planned and COMPANY has acquired the legal property rights and regulatory permits to conduct such mining activities. Full extraction mining causes surface subsidence that may affect surface structures. The mining subsidence may also create lateral stresses within the geologic overburden above the coal seam.
 - a. APP accepts all responsibility to monitor, maintain, mitigate, and repair all of its facilities including wells, pipelines, compressor stations, all surface facilities, and appurtenant facilities from the effects of subsidence from the underground mining activities of COMPANY.
 - b. APP shall be solely responsible for all costs and expenses to monitor, maintain, mitigate and repair any and all of its facilities that are constructed and installed after the effective date of this Agreement from the effects of subsidence from the underground mining activities of COMPANY.
 - c. COMPANY and APP agree to employ the principals of common law property rights (the party that does not have superior property rights is responsible) for all subsidence related costs and expenses relating to surface facilities that are in place and operational on the effective date of this Agreement.
 15. COMPANY and APP agree to fully cooperate and support each other's permitting and regulatory approval activity. Each party agrees that it will not object to any permit submittal nor will it appeal any permit approval provided that the terms and conditions of this Agreement are followed.
 16. This agreement shall extend to and be binding upon the heirs, successors, assigns, legal representatives, affiliates and joint venture partners of the parties hereto.
 17. This Agreement represents the entire understanding of the parties with respect to the matters referred to herein and supersedes all other understandings, written or oral, between the parties with respect thereto.
 18. No amendment, modification, or waiver of any provision of the Agreement shall be valid, unless in writing signed by both parties.

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01/18/2019

4705-02119

In WITNESS WHEREOF, each of CONSOLIDATION COAL COMPANY, MURRAY AMERICAN ENERGY, INC. and AMERICAN PETROLEUM PARTNERS OPERATING, LLC has executed this Agreement intending to be legally bound hereby.

WITNESS:

[Signature]

CONSOLIDATION COAL COMPANY

By:

Name: [Signature]

Title: SECRETARY

WITNESS:

[Signature]

MURRAY AMERICAN ENERGY, INC.

By:

Name: [Signature]

Title: SECRETARY

WITNESS:

[Signature]

AMERICAN PETROLEUM PARTNERS OPERATING, LLC

By:

Name: Braulio Silva

Title: VP. Drilling

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01/18/2019

4705-02119

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

August 22, 2018

Jill M. Newman
Deputy Commissioner

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

Subject: DOH Permit for the Castle Black Pad, Marshall County
Castle Black 7UH Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2017-0611 which has been issued to American Petroleum Partners for access to the State Road for a well site located off of Marshall County Route 5 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 O&G Coordinator

Cc: Braulio Silva
American Petroleum Partners
CH, OM, D-6
File

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**
Water	Operator	Carrier/Base Fluid			
			Water	7732-18-5	100.00000
Terraprop Plus 30/50	Baker Hughes	Proppant			
			Aluminum Oxide	1344-28-1	100.00000
			Amorphous Silica	7631-86-9	20.00000
			Titanium Dioxide	13463-67-7	5.00000
			Iron Oxide	1309-37-1	5.00000
Sand (Proppant)	Stingray	Proppant			
			Silica Substrate	14808-60-7	87.00000
ProLite 40/70	Imerys	Proppant			
			Mullite	1302-93-8	70.00000
			Cristobalite	14464-46-1	30.00000
			Amorphous Silica	7631-86-9	15.00000
Hydrochloric Acid (HCl)	FTSI	Acid			
			Hydrogen Chloride	7647-01-0	15.00000
SI-117	WST	Scale Inhibitor			
			Copolymer of Maleic and Acrylic Acid	52255-49-9	70.00000
			Ethylene glycol	107-21-1	40.00000
			DETA phosphonate	15827-60-8	20.00000
			Hexamethylene Triamine Penta (Methylene Phosphonic Acid)	34690-00-1	20.00000
			Phosphino carboxylic acid polymer	71050-62-9	20.00000
K-BAC 1020 DBNPA	WST	Bactericide			
			Polyethylene glycol	25322-68-3	50.00000
			Water	7732-18-5	30.00000
			2,2-Dibromo-3-nitrilopropionamide	10222-01-2	21.00000
NEFE-180	Stingray	Acid Inhibitor/Iron Control			
			Acetic Acid	64-19-7	60.00000
			Methanol	67-56-1	30.00000
			2-Ethylhexanol	104-76-7	7.50000
			Cocunut Oil Acid diethanolamine	68603-42-9	3.00000
			Alcohols, C15-15, ethoxylated	68951-67-7	3.00000
			Olefin	64743-02-8	3.00000
			Fatty Acids, tall oil	61790-12-3	3.00000
			2-Propyn-1-ol	107-19-7	3.00000
FRA-409	Stingray	Friction Reducer			
			Copolymer of 2-propenamide	Proprietary	30.00000
			Distillates (petroleum), Hydrotreated Light	64742-47-8	20.00000
			Alcohols, C12-16, Ethoxylated	68551-12-2	2.00000
			Alkanolamide	93-83-4	2.00000
			Ammonium Chloride	12125-02-9	1.00000
CSL-30	Stingray	pH Control			
			Sodium Hydroxide	1310-73-2	30.00000
WG-36 GELLING AGENT	Halliburton	Gelling Agent			
			Guar gum	9000-30-0	100.00000
SP BREAKER	Halliburton	Breaker			
			Sodium persulfate	7775-27-1	100.00000
LOSURF-300D	Halliburton	Non-ionic Surfactant			
			Ethanol	64-17-5	60.00000
			Heavy aromatic petroleum	64742-94-5	30.00000
			Naphthalene	91-20-3	5.00000
			Poly(oxy-1,2-ethanediyl), alpha-	127087-87-0	5.00000
			1,2,4 Trimethylbenzene	95-63-6	1.00000

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CASTLE BLACK WELL PAD WEBSTER DISTRICT, MARSHALL COUNTY, WV FEBRUARY 2017

WEST VIRGINIA 811

TWO WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE WV ONE CALL SYSTEM, INC., 1-800-245-4848 (WV ONE CALL TICKET#1701749131)

OWNER



AMERICAN PETROLUUM PARTNERS OPERATING, LLC
380 SOUTHPOINTE BOULEVARD, PLAZA 2
SUITE 120, CANONSBURG, PA 15317

- SHEET INDEX**
1. TITLE SHEET
 - 2-3. EVACUATION ROUTE/PREVAILING WIND
 4. E&S CONTROL LAYOUT OVERVIEW
 5. E&S CONTROL LAYOUT
 6. E&S CONTROL AND SITE PLAN OVERVIEW
 7. E&S CONTROL AND SITE PLAN
 8. WELL PAD AND ACCESS ROAD CROSS-SECTIONS AND PROFILES
 9. WELL PAD OUTLET PROFILES
 - 10-12. DETAILS
 13. RECLAMATION PLAN OVERVIEW
 14. RECLAMATION PLAN

TOTAL DISTURBED AREA: 9.48 AC.
ACCESS ROAD DISTURBED AREA: 1.02 AC.
WELL PAD DISTURBED AREA: 8.46 AC.

PROPERTY OWNER DISTURBANCE
GEETA (TAX MAP AND PARCEL 15-1-6): 9.48 AC.

PLANS PREPARED BY:
BOORD BENCHEK & ASSOCIATES, INC.
ENGINEERING, SURVEYING, CONSTRUCTION AND MINING SERVICES
SOUTHPOINTE, PA 15317 PHONE: 724-746-1055



Andrew Benchek 2-24-17

ANDREW BENCHEK
P.E.



**APPROVED
WVDEP OOG**
BOB 9/18/2018

IN ACCORDANCE WITH WV 35 CSR 8 THE FOLLOWING EROSION & SEDIMENT CONTROL PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES ESTABLISHED BY THE CHIEF AND PROVIDED IN THE OFFICE'S EROSION AND SEDIMENT CONTROL FIELD MANUAL. A GENERAL CONSTRUCTION SEQUENCE, DESCRIPTION OF STABILIZATION METHODS, AND DETAILS & SPECIFICATIONS FOR EROSION & SEDIMENT BEST MANAGEMENT PRACTICES HAVE BEEN INCLUDED IN THE PROVIDED DETAIL SHEETS.

REVISIONS	
NO.	DESCRIPTION

TITLE SHEET
CASTLE BLACK WELL PAD
WEBSTER DISTRICT, MARSHALL COUNTY, WV

COORDINATES

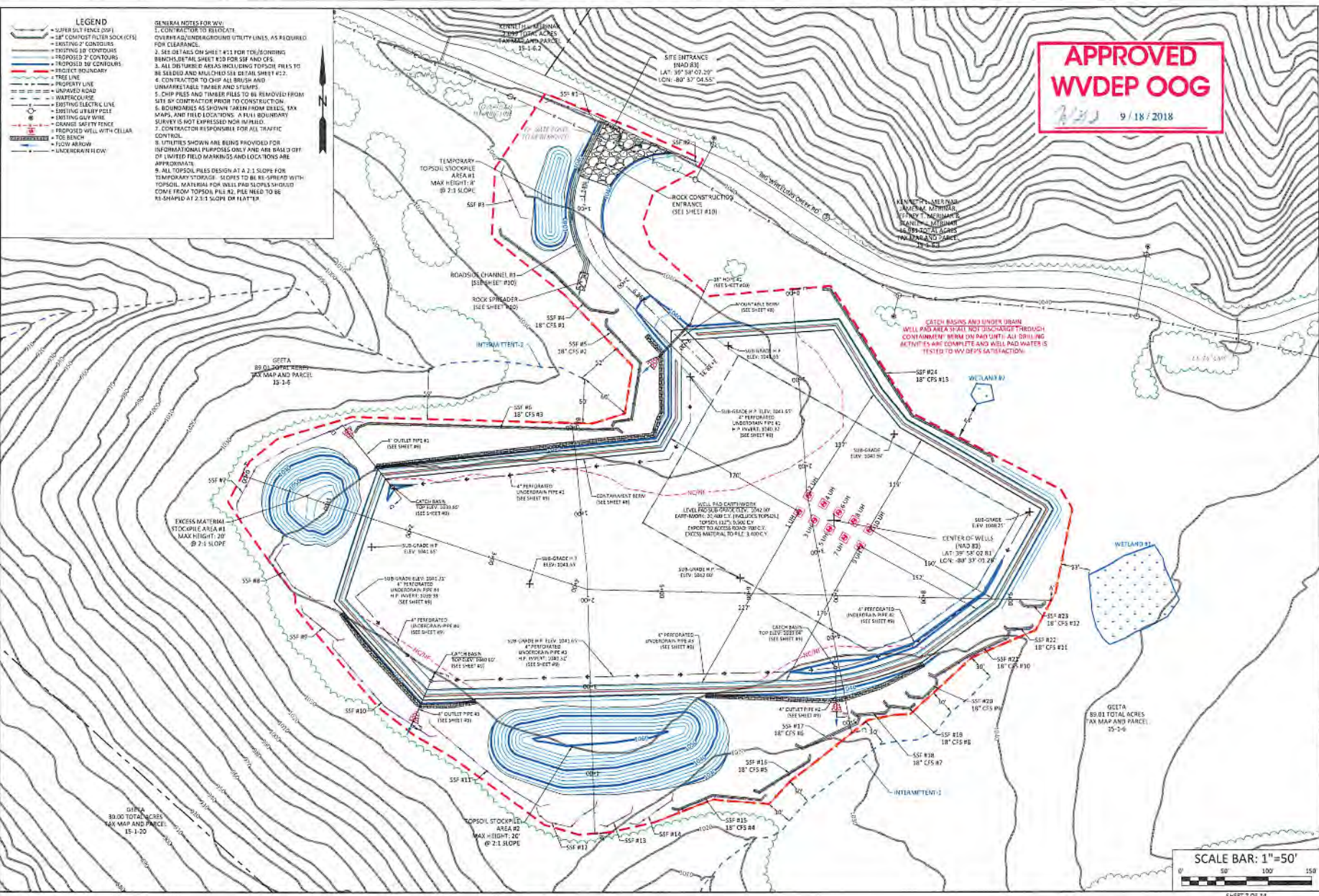
SITE ENTRANCE
(NAD 83)
LAT: 39° 58' 07.29"
LONG: 80° 37' 04.55"
(NAD 27)
LAT: 39° 58' 07.02"
LONG: 80° 37' 05.27"

CENTER OF WELLS
(NAD 83)
LAT: 39° 58' 02.81"
LONG: 80° 37' 01.26"
(NAD 27)
LAT: 39° 58' 02.53"
LONG: 80° 37' 01.98"



1" = 1000'

SHEET
1
OF
14



APPROVED
WVDEP OOG
 9/18/2018

- LEGEND**
- - - SUPER SALT FENCE (SSF)
 - - - 24" CONCRETE PILE SOCK (CPS)
 - - - EXISTING 2" CONTOURS
 - - - PROPOSED 2" CONTOURS
 - - - PROPOSED 10' CONTOURS
 - - - PROPOSED 20' CONTOURS
 - - - PROJECT BOUNDARY
 - - - TREE LINE
 - - - PROPERTY LINE
 - - - UNPAVED ROAD
 - - - WATERCOURSE
 - - - EXISTING ELECTRICAL LINE
 - - - EXISTING UTILITY POLE
 - - - EXISTING GUY WIRE
 - - - DRAWING SAFETY TRACT
 - - - PROPOSED WELL WITH CELLAR
 - - - TOE BENCH
 - - - FLOW ARROW
 - - - UNDERDRAIN FLOW

- GENERAL NOTES FOR WELL**
1. CONTRACTOR TO VERIFY ALL OVERHEAD AND UNDERGROUND UTILITY LINES, AS REQUIRED FOR CLEARANCE.
 2. SEE DETAILS ON SHEET #11 FOR TOLERANCING BENCHES, DETAIL SHEET #20 FOR SSP AND CPS.
 3. ALL DRILLING AREAS INCLUDING TOPSOIL PILES TO BE SLOPED AND MULCHED SEE DETAIL SHEET #22.
 4. CONTRACTOR TO CHIP ALL BRUSH AND UNWANTED TREES, TIMBER AND STUMPS.
 5. CHIP PILES AND TIMBER PILES TO BE REMOVED FROM SITE BY CONTRACTOR PRIOR TO CONSTRUCTION.
 6. BOUNDARIES AS SHOWN TAKEN FROM DEEDS, TAX MAPS, AND FILE LOCATIONS. A FULL BOUNDARY SURVEY IS NOT EXPRESSED NOR IMPLIED.
 7. CONTRACTOR RESPONSIBLE FOR ALL TRAFFIC CONTROL.
 8. UTILITIES SHOWN ARE BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED OFF OF UNATED FIELD MARKINGS AND LOCATIONS ARE APPROXIMATE.
 9. ALL TOPSOIL PILES DESIGN AT A 2:1 SLOPE FOR TEMPORARY STORAGE. SLOPES TO BE RE-SURFACED WITH TOPSOIL MATERIAL FOR WELLS PAD SLOPES SHOULD COME FROM TOPSOIL PILE #2. PILES NEED TO BE RE-SHARPEN AT 2:1 SLOPE ON FLATTER.

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

E&S CONTROL AND SITE PLAN

THIS DOCUMENT WAS PREPARED BY:
 BOORD, BENCHEK AND ASSOC., INC.
 FOR AMERICAN PETROLEUM PARTNERS OPERATING, LLC.

DATE:
 FEBRUARY 2017
CASTLE BLACK
WELL PAD
 WEBSTER DISTRICT,
 MARSHALL COUNTY,
 WV

NO.	DATE	DESCRIPTION
1	1/17/17	ISSUED FOR PERMITTING

