



west virginia department of environmental protection

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

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

Monday, March 20, 2017
WELL WORK PERMIT
Horizontal 6A / New Drill

MOUNTAINEER KEYSTONE, LLC (A)
6031 WALLACE RD EXT, STE 300

WEXFORD , PA 15090

Re: Permit approval for 212
47-091-01328-00-00

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: 212
Farm Name: MACDONALD, CHARLES E.
U.S. WELL NUMBER: 47-091-01328-00-00
Horizontal 6A / New Drill
Date Issued: 3/20/2017

Promoting a healthy environment.

03/24/2017

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.

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

1) Well Operator: Mountaineer Keystone, LLC 494501227 Taylor Fetterman Gladesville 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: 212 Well Pad Name: UNB

3) Farm Name/Surface Owner: Charles E. MacDonald Public Road Access: Rt. 119

4) Elevation, current ground: 1882.05' Elevation, proposed post-construction: 1878.25'

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):
Marcellus Shale, 7877' (Top), 7958' (Bottom), 81', 0.5psi/ft

8) Proposed Total Vertical Depth: 7958'

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 16,199'

11) Proposed Horizontal Leg Length: 7,487'

12) Approximate Fresh Water Strata Depths: 350'

13) Method to Determine Fresh Water Depths: Offsetting wells reported water depths (091-00113, 091-00776, 091-00958, 091-00963, 091-00970)

14) Approximate Saltwater Depths: 910'

15) Approximate Coal Seam Depths: Bakerstown 30', Upper Freeport 218', Lower Freeport 290', Upper Kittanning 345', Middle Kittanning 388', Lower Kittanning 438'

16) Approximate Depth to Possible Void (coal mine, karst, other): None known

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: _____
Depth: _____
Seam: _____
Owner: _____

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Pressures

Well	Pysell 1HM	Pysell 2HM	Pysell 3HM
From	12/1/2015	12/1/2015	12/1/2015
To	3/9/2017	3/9/2017	3/9/2017
Max P(Cas) (psi)	3100	2900	2800
Max TVD	7,689	7,710	7,707
Calculated PSI/ft.	0.40	0.38	0.36

WW-6B
(04/15)

API NO. 47- 91-01328
 OPERATOR WELL NO. 212
 Well Pad Name: UNB

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	24"	New	H-40	94#	80'	80'	CTS
Fresh Water	13.375"	New	J-55	54.5#	500'	500'	CTS
Coal							
Intermediate	9.625"	New	J-55	40#	1500'	1500'	CTS
Production	5.5"	New	P-110	20#	16,199'	16,199'	TOC @ 1,350' MD
Tubing							
Liners							

Lester L. Shepard 3-9-17

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	24"	36"			0	None	None
Fresh Water	13.375"	17.5"	0.38"	2730	0	Class A, 3% CaC12	1.20
Coal							
Intermediate	9.625"	12.25"	0.395"	3950 psi	0	Class A, 2% CaC12	1.29
Production	5.5"	8.5-8.75	0.361"	12,640 psi	9500	Type 1	1.64/1.32
Tubing					5000		
Liners					N/A		

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WV Department of
Environmental Protection

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

The well will be started with a conductor rig drilling a 36" hole to Conductor programmed depth then running 24" casing and grout cement back to surface. The conductor rig will move out and the drilling rig will move in and rig up. The drilling rig will then spud a 17 1/2" hole and drill to fresh water casing (Surface) to the programmed depth, Run 13- 3/8" casing and cement to surface. The rig will continue drilling a 12- 1/4" intermediate hole to the programmed depth, run 9- 5/8" casing and cement to surface. The rig will then continue to drill a 8- 3/4" hole to a designed KOP and then start drilling the curve and lateral section to the programmed total measured depth, run 5 1/2" casing and cement according to the program.

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

The well will be completed using a plug and perforation method and stimulated with a slickwater and sand slurry. The anticipated maximum rate will be 90 bpm and the maximum pressure will be 9,500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 16.3

22) Area to be disturbed for well pad only, less access road (acres): 5.9

23) Describe centralizer placement for each casing string:

20"- No centralizers 13 3/8" – one bow spring centralizer on every other joint 9 5/8" – one bow spring centralizer every third joint from TD to surface 5 1/2" – one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 1,600'; there will be no centralizers from 1,600' to surface.

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

24" will be grouted from surface. The 13-3/8" casing will be cemented to surface with Class A cement and no greater than 3% CaCl (calcium chloride). The 9-5/8" casing will be cemented to surface with Type 1 cement, & no greater than 3% calcium chloride. The 5-1/2" production string will be cemented back to 1,350' (+/- 200' above the casing shoe for the 9-5/8") with Type 1 or Class A cement retarder (to extend pumpability) cellophane flaked for fluid loss, Bentonite gel as an extender (increased pumpability and fluid loss), a defoaming agent to decrease cement foaming during mixing to insure the cement is of proper weight to placement and possibly a gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps cement achieve a "right-angle" set) during the plastic phase of the cement set-up.

25) Proposed borehole conditioning procedures:

Top holes will be drilled with fresh water to KOP. At KOP, the wellbore will be loaded with synthetic oil based mud, barite-weighted mud system with such properties as to build a filter-cake on the face to the bore-hole. This will provide lubricity as well as stabilizing the well bore. We will begin rotating the drill string and mud will be circulated upon reaching TD until no further cuttings are observed coming across the shaker screens. Once clean mud is circulated back to surface, we will pull three stands of drill pipe, load the hole, pull three stands and load the hole. The weight indicator on the rig will be monitored for any occurrences of drag and if any are noticed, we will re-run the previous stand of pipe pulled across and circulate 2X bottoms up while watching the shakers for signs of cuttings. Once at the base of the curve, the string will be continuously rotated while pumping 2X bottoms up. We will pull three stands and fill the pipe in order to reach the vertical section of the well.

*Note: Attach additional sheets as needed.

MAR 09 2017



Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Mountaineer Keystone hydraulic fracturing in Taylor County, WV prior to hydraulic fracturing at the following MK wells on the UNB 212 Pad.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 8,000' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formation (approximately 4,200' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with best management practices and emergency action plans for this site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the Division of Oil and Gas is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Conventional Operators.

MK, using available data (WV Geological Survey, WVDEP Website, and IHS data service), has identified all known conventional wells and well operators within 500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in Attachment A.

Upon approval of this plan, MK will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in Attachment B. The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to MK and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure.
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and MK if any changes in water, gas production, pressure or other anomalies are identified.

DEC 13 2015
03/24/2017

Area of Review Report - UNB Pad, 212 Lateral, Taylor County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
Charles E MacDonald 2	091-00970	Alliance	Active	39.43203	-79.944133	4230	Greenland Gap Group, Fourth, Riley, Benson	NA
Meiba/John Zinn 1	091-00776	Alliance	Active	39.435764	-79.950842	4320	Little Lime, Green Brier Group, Big Lime, Price Fm & Equivs, Warren First, Riley Benson	NA
Charles E MacDonald 3	091-00974	Petroleum Development Corp.	Plugged	39.435945	-79.946565	NA	NA	NA

DECEMBER 13 2015
 COUNTY OF TAYLOR, WEST VIRGINIA
 COMMISSIONER OF DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

91-01328

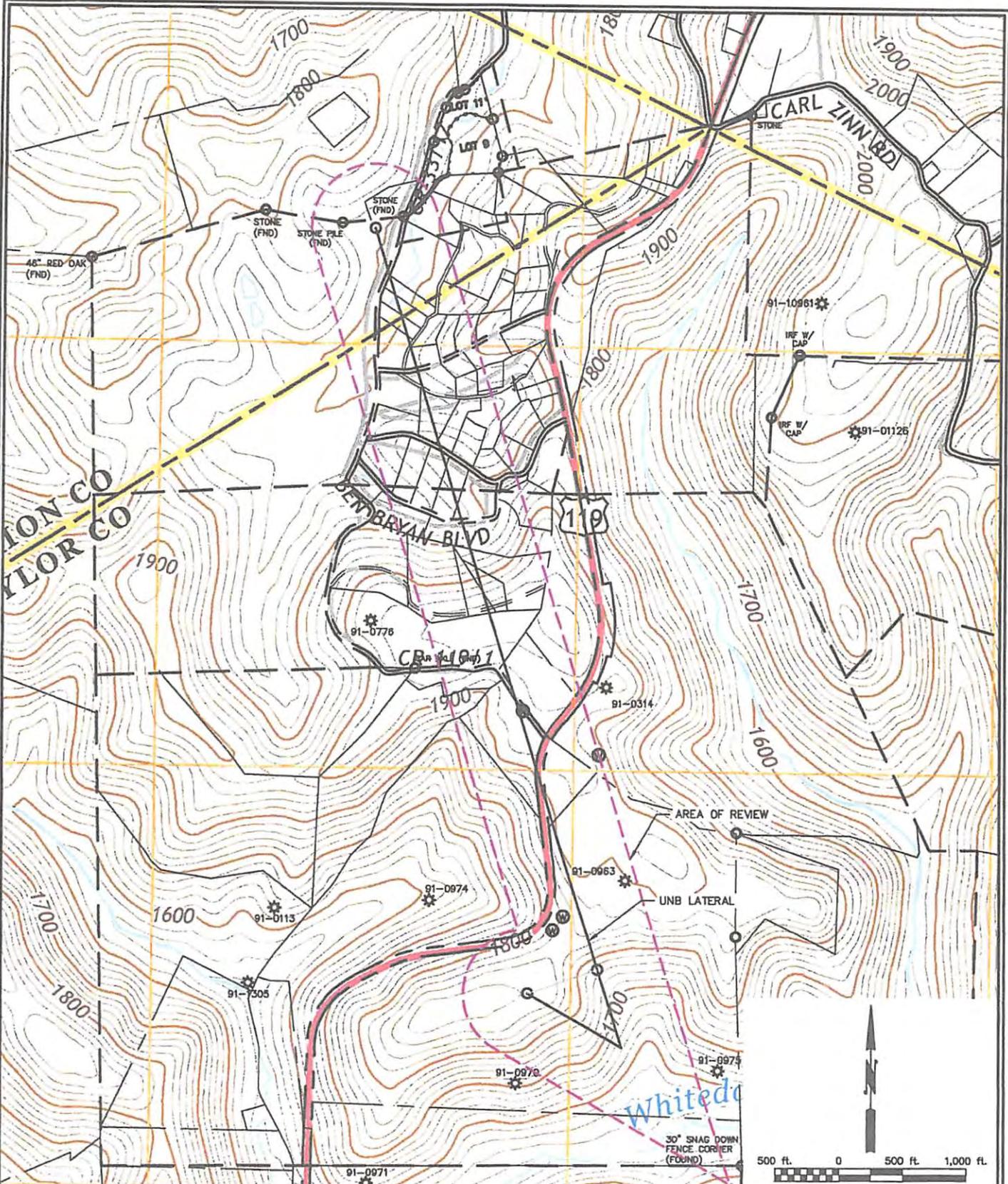


2. Reporting

MK will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately after any event of any noted abnormalities.

DEC 13 2015

91-01328



CADD FILE: R:\030-2770 - MK - UNB South Road Access\Drawing\MOE Schematics\2770-ADR.dwg PLOT DATE/TIME: 3/9/2017 11:19 AM

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THRASHER
 THE THRASHER GROUP INC.
 600 WHITE OAKS BOULEVARD, BRIDGEPORT, WV 26330
 PHONE (304) 624-4108 • FAX (304) 624-7831

Mountaineer Keystone

MOUNTAINEER KEYSTONE, LLC.
 UNB WELL PAD
 AREA OF REVIEW EXHIBIT
 FETTERMAN DISTRICT, TAYLOR COUNTY, WV
 WELL NO. UNB 214

DATE
 03/08/2017
 SHEET No.
 4

03/24/2017

WW-9
(2/15)

API Number 47 - 091 01328
Operator's Well No. UNB 212

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Mountaineer Keystone, LLC OP Code 484501227

Watershed (HUC 10) White Day Creek Quadrangle Gladesville 7.5'

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: produced water

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 60 ml

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number various)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: Yes, the closed loop system will contain all of the drilling medium and drill cuttings on location to them be taken to landfill.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. horizontal freshwater, horizontal, synthetic oil-based mix

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

Additives to be used in drilling medium? Bentonite, Soap and Polymer sticks, Soda Ash, Sodium Carbonate, Defoamer, Base Oil, Emulsifiers, Lime, & Barite

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

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

-Landfill or offsite name/permit number? Advanced Disposal Services, Chestnut Valley Landfill

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 Nathan Skeen

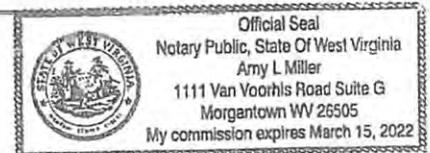
Company Official (Typed Name) Nathan Skeen

Company Official Title Designated Agent

Subscribed and sworn before me this 8th day of December, 20 15

Amy L Miller Notary Public

My commission expires 03/15/2022



03/24/2017

Mountaineer Keystone, LLC

Proposed Revegetation Treatment: Acres Disturbed 16.3 Prevegetation pH unknown

Lime 2.67 Tons/acre or to correct to pH 6.4

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch 3-4 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	129	Orchard Grass	129
Ryegrass	93	Ryegrass	93
Clover	24	Clover	24
Timothy	45	Timothy	45

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Amel J. Reynolds*

Comments: Pre-seed / mulch all disturbed areas as soon as reasonably possible per regulation.

Upgrade E & S where needed per WV DEP E & S manual, if necessary.

Title: Oil and Gas Inspector Date: 12-18-15

Field Reviewed? Yes No

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Office of Oil and Gas

DEC 16 2016

WV Department of
Environmental Protection

91-01328

Mountaineer Keystone LLC



SITE SAFETY PLAN

UNB #212 Well PAD

911 Address:

8740 Victory Avenue

Grafton, WV 26354

Robert A. L. Reynolds

12-12-16

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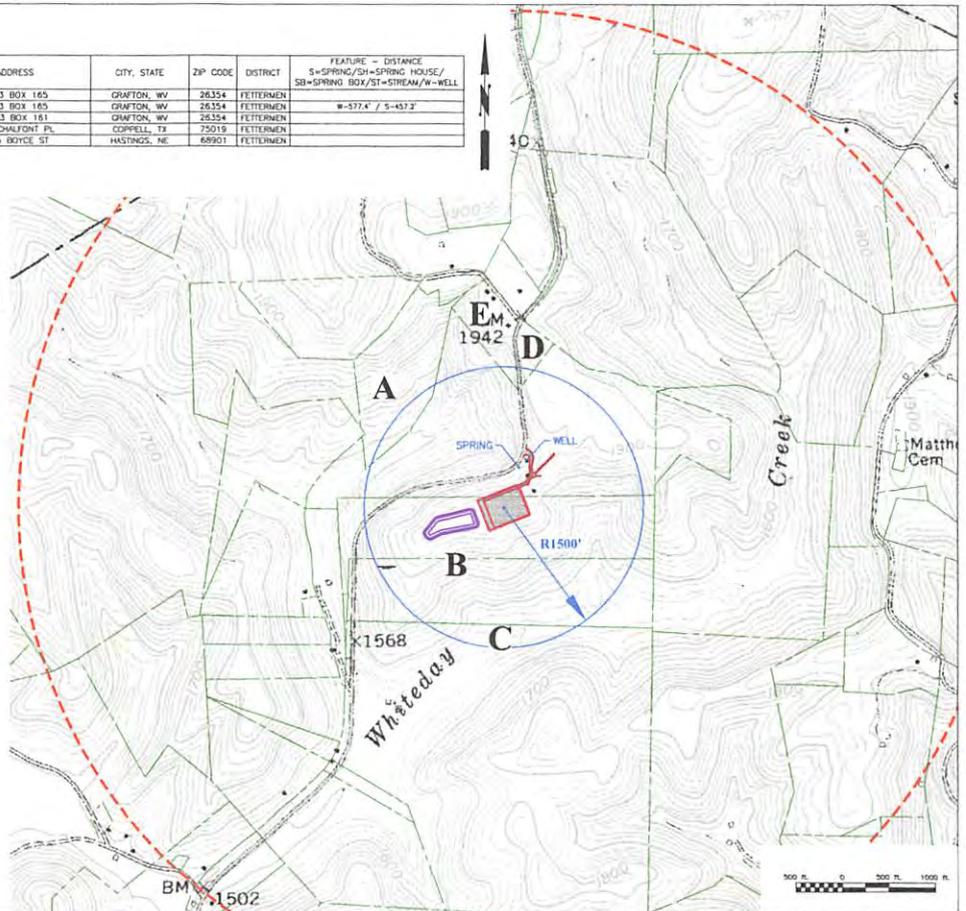
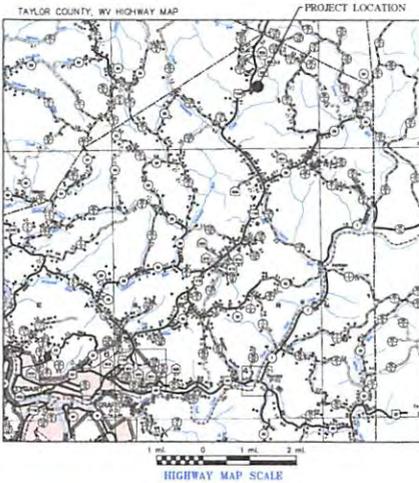
DEC 16 2016

WV Department of
Environmental Protection

91-01328

ID	TM	PAR	OWNER	ADDRESS	CITY, STATE	ZIP CODE	DISTRICT	FEATURE - DISTANCE
A	3	19.1	CHARLES E. & LAVERNE & SURV MACDONALD	RR 3 BOX 165	GRAFTON, WV	26354	FETTERMEN	S=SPRING/SI=SPRING HOUSE/ SD=SPRING BOX/ST=STREAM/W=W-WELL
B	3	16	CHARLES E. MACDONALD	RR 3 BOX 165	GRAFTON, WV	26354	FETTERMEN	W=577.4' / S=437.2'
C	6	7	VERONICA M. BREWER	RR 3 BOX 161	GRAFTON, WV	26354	FETTERMEN	
D	3	22	MARY EPICKSON	R70 CHALFONT PL	COPELLE, TX	75019	FETTERMEN	
E	3	17	TRUSTEE'S FARMONT DIST OF FREE METHODIST CHURCH	1835 BOYCE ST	HASTINGS, NE	68901	FETTERMEN	

LEGEND	
	= PROPERTY LINE
	= 1500' BOUNDARY LINE
E	= PROPERTY ID
	= POTENTIAL WATER SOURCE



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NO.	BY	DATE	DESCRIPTION

Mountaineer Keystone
L.L.C.

SCALE:	DRAWN:	CHECKED:	DATE:
DATE:	DATE:	DATE:	DATE:
SUPPLY DATE:	DATE:	DATE:	DATE:
FIELD BOOK NO.:			

THRASHER
THE THRASHER GROUP, INC.
600 WHITE OAK BOULEVARD, BRIDGEPORT, WV 26330
PHONE (304) 624-4100 FAX (304) 624-7831

PROJECT NO.	101-030-2770
CONTRACT NO.	
PROJECT NO.	

MOUNTAINEER KEYSTONE, LLC
CONSTRUCTION PLANS FOR UNB
WELL PAD AND FLOWBACK PIT
TAYLOR COUNTY, WV
WATER SOURCES

SHEET NO.	V
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03/24/2017

MOUNTAINEER KEYSTONE, LLC
WELL NO. UNB 212

NOTES:
-PLAT ORIENTATION, CORNERS, AND WELL REFERENCES ARE BASED UPON THE GRID NORTH MERIDIAN FOR THE WV STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 27. WELL LOCATION REFERENCE TIES ARE BASED UPON THE MAGNETIC MERIDIAN.
-THERE APPEARS TO BE 1 WATER WELL LOCATED WITHIN 1000' OF WELL UNB 212.
○ = IRON ROD FOUND UNLESS OTHERWISE NOTED

7,765' TOP HOLE

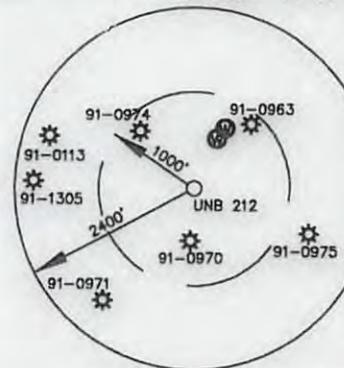
10,325' BOTTOM HOLE

LATITUDE 39° 27' 30"

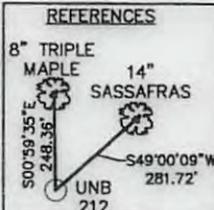
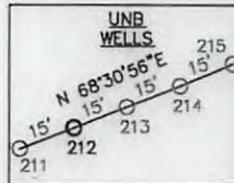
LONGITUDE 79° 55' 00"

3,055' BOTTOM HOLE

8,927' TOP HOLE



ID	TM	FAP	OWNER	ACRES
A	3	16	N/F CHARLES E. MacDONALD	222.75
B	6	7	VIRGINIA MORGAN BREWER	230.00
C	3	19	N/F CHARLES EDWARD & LAVERNE MACDONALD & SURV	20.26
D	3	19	N/F BEVERLY HORNBECK TRUSTEE OF THE BEVERLY HORNBECK LIVING TRUST	24.50
E	27	4	N/F BEVERLY HORNBECK TRUSTEE OF THE BEVERLY HORNBECK LIVING TRUST	152.00



WELL NO. UNB 212 TOP HOLE
STATE PLANE COORDINATES (NAD 27 NORTH ZONE)
N: 340433.00
E: 1874551.90
LAT: 39° 26' 02.136"
LON: 79° 56' 38.142"
STATE PLANE COORDINATES (NAD 83 NORTH ZONE-METER)
N: 103775.96
E: 561782.28
UTM COORDINATES (NAD 83-METER)
N: 4365463.76
E: 590886.91

WELL NO. UNB 212 LANDING POINT
STATE PLANE COORDINATES (NAD 27 NORTH ZONE)
N: 339103.92
E: 1874209.82
LAT: 39° 25' 48.983"
LON: 79° 56' 42.419"
STATE PLANE COORDINATES (NAD 83 NORTH ZONE-METER)
N: 103370.86
E: 561678.00
UTM COORDINATES (NAD 83-METER)
N: 4365057.09
E: 590789.42

WELL NO. UNB 212 BOTTOM HOLE
STATE PLANE COORDINATES (NAD 27 NORTH ZONE)
N: 346263.90
E: 1872018.87
LAT: 39° 26' 59.640"
LON: 79° 57' 10.801"
STATE PLANE COORDINATES (NAD 83 NORTH ZONE-METER)
N: 105553.15
E: 561010.24
UTM COORDINATES (NAD 83-METER)
N: 4367227.42
E: 590085.58

NORTH

46" RED OAK (FND)
BOTTOM HOLE 110.38' SOUTH OF LEASE LINE

STONE (FND)
STONE PILE (FND)

BH



WVL02896.001-003

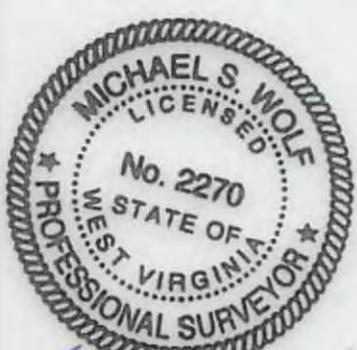
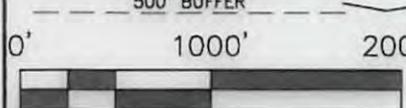
WVL00519.000

WVL00519.000

UNB 212

WVL00665.000

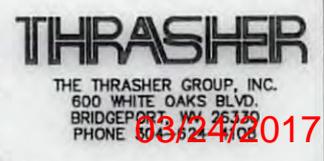
TH|BH
DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAP
LEASE BOUNDARY
500' BUFFER



Michael S. Wolf, P.S. 2270

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 DIVISION OF ENVIRONMENTAL PROTECTION.

FILE NO. <u>030-1999</u> SCALE: 1"=1000' MINIMUM DEGREE OF ACCURACY: 1 in 2500 PROVEN SOURCE OF ELEVATION: OPUS SURVEY GRADE GPS	<p>STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OFFICE OF OIL & GAS</p>	DATE <u>DECEMBER 05</u> 2016 OPERATOR'S WELL NO. <u>UNB NO. 212</u> API WELL NO. <u>47</u> - <u>091</u> - <u>01328H6A</u> STATE COUNTY PERMIT
WELL TYPE: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> (IF "GAS"), PRODUCTION <input checked="" type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> LOCATION: ELEVATION: <u>1878'</u> WATER SHED: <u>WHITE DAY CREEK</u> DISTRICT: <u>FETTERMAN</u> COUNTY: <u>TAYLOR</u> QUADRANGLE: <u>GLADESVILLE 7.5'</u> ACREAGE: <u>222.75 AC±</u> SURFACE OWNER: <u>CHARLES E. MacDONALD</u> LEASE ACREAGE: <u>649.51 AC +</u> OIL & GAS ROYALTY OWNER: <u>JP MORGAN</u> LEASE NO. _____		
PROPOSED WORK: DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____		
PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ TARGET FORMATION: <u>MARCELLUS SHALE</u> ESTIMATED DEPTH: <u>7,958' TVD / 16,199' MD</u>		
WELL OPERATOR: <u>MOUNTAINEER KEYSTONE</u> DESIGNATED AGENT: <u>NATHAN SKEEN</u> ADDRESS: <u>6031 WALLACE ROAD EX., SUITE 300</u> ADDRESS: <u>65 PROFESSIONAL PLACE, SUITE 200</u> <u>WEXFORD, PA 15090</u> <u>BRIDGEPORT, WV 26330</u>		



**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

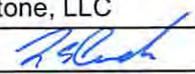
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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

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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: Mountaineer Keystone, LLC
 By: Eddie Carder 
 Its: Regulatory Affairs Manager

Attachment to WW-6A1, UNB No. 212HM

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
WVL00519.000	Union National Bank, Trustee - Truman E. Gore and C. Burke Morris	Pepper Resources, Inc.	12.50%	44/70	907
	Pepper Resources, Inc.	Petroleum Development Corporation		19/440	
	Petroleum Development Corporation	PDC Mountaineer, LLC		31/28	
	PDC Mountaineer, LLC	PDC Mountaineer Holdings, LLC		30/698	
WVL00665.000	Virginia M. Brewer, widow	Petroleum Development Corporation	12.50%	58/349	763.776
	Petroleum Development Corporation	PDC Mountaineer, LLC		31/267	
	Virginia M. Brewer	PDC Mountaineer, LLC		63/559	
	PDC Mountaineer, LLC	PDC Mountaineer Holdings, LLC			
WVL02896.001	Ronald L. and Beverly Hornbeck, H/W	Chesapeake Appalachia, L.L.C.	12.50%	1021/314 1064/301	152
	Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties, Inc.		34/738	
	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties, Inc.	PDC Mountaineer, LLC		45/677	
	PDC Mountaineer, LLC	PDC Mountaineer Holdings, LLC			
WVL02896.002	Cara Michelle Davidson, a/k/a Cara Michelle Krauch	Chesapeake Appalachia, L.L.C.	12.50%	1072/754	152
	Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties, Inc.			
	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties, Inc.	PDC Mountaineer, LLC		45/677	
	PDC Mountaineer, LLC	PDC Mountaineer Holdings, LLC			
WVL02896.003	Beth Mays a/k/a Catherine Elizabeth (Beth) Mays	Chesapeake Appalachia, L.L.C.	15.00%	1070/137	152
	Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties, Inc.			
	Chesapeake Appalachia, LLC and Statoil USA Onshore Properties, Inc.	PDC Mountaineer, LLC		45/677	
	PDC Mountaineer, LLC	PDC Mountaineer Holdings, LLC			

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 WV Department of Environmental Protection
 LEMMON/Ortal Protection

91-01328

Agreement to Drill, Complete and Operate Oil & Gas Wells

This Agreement to Drill, Complete and Operate Oil & Gas Wells (this "Agreement"), by and among Mountaineer Keystone LLC, a West Virginia limited liability company ("Mountaineer Keystone"), PDC Mountaineer, LLC, a Delaware limited liability company ("PDC"), and PDC Mountaineer Holdings, LLC, a Delaware limited liability company ("PDC Holdings"), is effective as of **October 15, 2014**. (the "Effective Date") and sets forth the terms pursuant to which Mountaineer Keystone will drill, complete and operate the Wells (as defined below) on behalf of PDC and PDC Holdings. Mountaineer Keystone, PDC, and PDC Holdings are each a "Party" and are collectively the "Parties". In consideration of the foregoing and the respective agreements hereinafter set forth and the mutual benefits to be derived therefrom, the Parties, intending to be legally bound, hereby agree as follows:

1. **Term:** This Agreement is effective from the Effective Date until terminated by Mountaineer Keystone on the one hand or PDC and PDC Holdings on the other hand with 30 days' written notice to the other Party or Parties, as applicable (the "Term").
2. **Authorization to Operate:** PDC and PDC Holdings authorize Mountaineer Keystone to undertake and perform, on PDC and PDC Holdings behalf, all operations, including without limitation permit applications, well pad preparation, drilling and completing wells, and marketing gas, oil and other hydrocarbons therefrom with respect to all oil and gas wells to be drilled on oil and gas leasehold acreage held by PDC or PDC Holdings. PDC, PDC Holdings and Mountaineer Keystone are affiliates with a common parent. Mountaineer Keystone was formed to operate oil and gas leasehold acreage held by PDC, PDC Holdings and certain other affiliates. Mountaineer Keystone agrees that it shall, in a good and workmanlike manner and in accordance with industry standards as they prevail in the area, drill, complete and operate oil and gas wells on leasehold acreage owned by PDC or PDC Holdings from time to time as directed by PDC or PDC Holdings (collectively, the "Wells").
3. **No Third Party Beneficiary:** This Agreement is for the benefit of the Parties and is not for the benefit of any third party.
4. **Counterparts:** This Agreement may be simultaneously executed in several counterparts and via facsimile or similar electronic transmittal, each of which shall be deemed to be an original and taken together shall constitute one and the same instrument.

[Signature Page Follows]

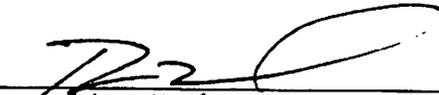
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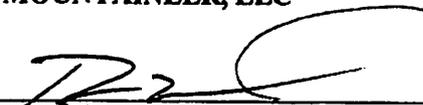
WV Department of
Environmental Protection

IN WITNESS WHEREOF, Mountaineer Keystone, PDC, and PDC Holdings have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

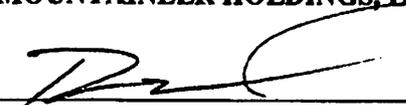
MOUNTAINEER KEYSTONE LLC

By: 
Name: Robert Koel
Title: CEO

PDC MOUNTAINEER, LLC

By: 
Name: Robert Koel
Title: CEO

PDC MOUNTAINEER HOLDINGS, LLC

By: 
Name: Robert Koel
Title: CEO

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WV Department of
Environmental Protection

91-01328



8/20/2015

Gene Smith
Assistant Chief – Office of Oil and Gas
WVDEP
601 57th Street, SE
Charleston, WV 25304

RE: Ownership of Roadways; UNB Pad, Taylor County, Fetterman District

Dear Mr. Smith:

In preparation of filing a permit application for the above referenced well, Mountaineer Keystone's Title Department conducted thorough title examinations to determine ownership of the oil and gas underlying all roadways crossed by the proposed well. The findings of our examinations show that that the roadways crossed by the proposed well are right of ways only, with the oil and gas being owned and covered by our leasehold as provided on the plat for the proposed well.

If you have any questions, concerns or need further information, please do not hesitate to contact me at the contact information below.

Sincerely,

A handwritten signature in blue ink that reads "Orla Lavender".

Orla Lavender
Director of Title

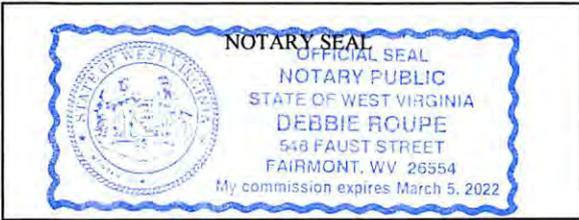
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03/24/2017

Certification of Notice is hereby given:

THEREFORE, I Nathan Skeen, 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>Mountaineer Keystone, LLC</u>	Address:	<u>65 Professional Place, Suite 200</u>
By:	<u>Nathan Skeen</u>		<u>Bridgeport, WV 26330</u>
Its:	<u>Designated Agent</u>	Facsimile:	<u>800-428-0981</u>
Telephone:	<u>724-940-1202</u>	Email:	<u>ecarder@mkeystone.com</u>



Subscribed and sworn before me this 13th day of December, 2016.

Debbie Roupe Notary Public

My Commission Expires March 5, 2022

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 12/13/2016 **Date Permit Application Filed:** 12/14/2016

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: Mr. Charles E. MacDonald Waiver ✓
Address: RR3 Box 165
Grafton, WV 26354
Name: _____
Address: _____
- SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: Mr. Charles E. MacDonald
Address: RR 3 Boxd 165
Grafton, WV 26354
Name: _____
Address: _____
- SURFACE OWNER(s) (Impoundments or Pits)
Name: Mr. Charles E. MacDonald
Address: RR 3 Box 165 ✓
Grafton, WV 26354

- COAL OWNER OR LESSEE
Name: _____
Address: _____
- COAL OPERATOR
Name: _____
Address: _____

- SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Mr. Charles E. MacDonald ✓
Address: RR 3 Box 165
Grafton, WV 26354

- OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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WV Department of
Environmental Protection

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Charles E. MacDonald and LaVerne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>590886.91</u>
County:	<u>Taylor</u>		Northing:	<u>4365463.76</u>
District:	<u>Fetterman</u>	Public Road Access:		<u>US 119</u>
Quadrangle:	<u>Gladesville</u>	Generally used farm name:		<u>MacDonald</u>
Watershed:	<u>White Day Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

*Please check the box that applies

- SURFACE OWNER
- SURFACE OWNER (Road and/or Other Disturbance)
- SURFACE OWNER (Impoundments/Pits)
- COAL OWNER OR LESSEE
- COAL OPERATOR
- WATER PURVEYOR
- OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: Charles E. MacDonald LaVerne M. MacDonald
Print Name: CHARLES E. MACDONALD LAVERNE M. MACDONALD
Date: 9/1/15

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: _____
Its: _____
Signature: RECEIVED
Date: Office of Oil and Gas

DEC 16 2016

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.

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

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

Office of Oil and Gas

DEC 16 2016

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

03/24/2017

WW-6A
(8-13)

API NO. 47-91 -01328
OPERATOR WELL NO. UNB 212
Well Pad Name: UNB

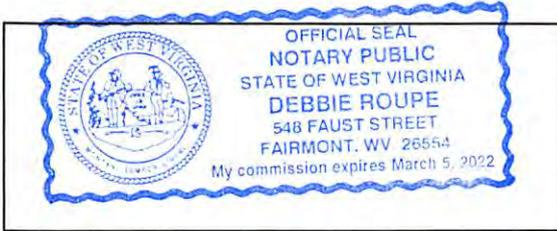
Notice is hereby given by:

Well Operator: Mountaineer Keystone, LLC *EDDIE CARDER, L & C*
Telephone: 724-940-1204
Email: ecarder@mkeystone.com

Address: 65 Professional Place, Suite 200
Bridgeport, WV 26330
Facsimile: 304-848-9134

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 12 day of Dec., 2016.

Debbie Roupe Notary Public

My Commission Expires March 5, 2022

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DEC 16 2016
WV Department of
Environmental Protection

03/24/2017

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

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

Date of Notice: 12/13/2016 **Date Permit Application Filed:** 12/14/2016

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: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Patriot Reserve Holdings, LLC
Address: 500 Lee Street East, Suite 900
Charleston, WV 25301

COAL OPERATOR
Name: Patriot Reserve Holdings, LLC
Address: 500 Lee Street East, Suite 900
Charleston, WV 25301

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: Office of Oil and Gas
Address: _____

DEC 16 2016
*Please attach additional forms if necessary

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: 12/13/2016 **Date Permit Application Filed:** 12/14/2016

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: _____
Address: _____

Name: _____
Address: _____

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

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Eastern Associated Coal Corporation
Address: 500 Lee Street East, Suite 202
Charleston, WV 25301

COAL OPERATOR

Name: Eastern Associated Coal Corporation
Address: 500 Lee Street East, Suite 202
Charleston, WV 25301

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

Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

DEC 16 2016
*Please attach additional forms if necessary

WV Department of
Environmental Protection

03/24/2017

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

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

Date of Notice: 12/13/2016 **Date Permit Application Filed:** 12/14/2016

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: _____

Address: _____

Name: _____

Address: _____

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

Name: _____

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Ark Land Company

Address: 114 Miley Drive Suite B

Charleston, WV 25311

COAL OPERATOR

Name: _____

Address: _____

SURFACE OWNER OF WATER WELL

AND/OR WATER PURVEYOR(s)

Name: _____

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____

Address: _____

*Please attach additional forms if necessary

DEC 13 2016

Department of Environmental Protection
03/24/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own any interest in the listed surface tract.

Comment and Waiver Provisions

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

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Charles E. MacDonald and LaVerne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

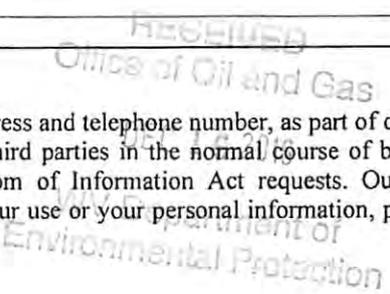
State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>590806.17</u>
County:	<u>Taylor</u>	UTM NAD 83 Northing:	<u>4365485.5</u>
District:	<u>Fetterman</u>	Public Road Access:	<u>US 119</u>
Quadrangle:	<u>Gladesville</u>	Generally used farm name:	<u>MacDonald</u>
Watershed:	<u>White Day Creek</u>		

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input checked="" type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p style="text-align: center;">FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Charles E. MacDonald, LaVerne M. MacDonald</u></p> <p>Print Name: <u>Charles E. MacDonald, LaVerne M. MacDonald</u></p> <p>Date: <u>9/1/15</u></p> <p style="text-align: center;">FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
---	--

Oil and Gas Privacy Notice:

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



03/24/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

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State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>590895.35</u>
County:	<u>Taylor</u>		Northing:	<u>4365467.22</u>
District:	<u>Fetterman</u>	Public Road Access:	<u>US 119</u>	
Quadrangle:	<u>Gladesville</u>	Generally used farm name:	<u>MacDonald</u>	
Watershed:	<u>White Day Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input checked="" type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Charles E. MacDonald / LaVerne M. MacDonald</u></p> <p>Print Name: <u>Charles E. MacDonald / LaVerne M. MacDonald</u></p> <p>Date: <u>9/1/15</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
---	--

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
WV Department of
Environmental Protection

03/24/2017

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

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Comment and Waiver Provisions

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

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, Charles E. MacDonald and LaVerne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>590889.52</u>
County:	<u>Taylor</u>		Northing:	<u>4365469.05</u>
District:	<u>Fetterman</u>	Public Road Access:		<u>US 119</u>
Quadrangle:	<u>Gladesville</u>	Generally used farm name:		<u>MacDonald</u>
Watershed:	<u>White Day Creek</u>			

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

<p>*Please check the box that applies</p> <p><input checked="" type="checkbox"/> SURFACE OWNER</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Road and/or Other Disturbance)</p> <p><input checked="" type="checkbox"/> SURFACE OWNER (Impoundments/Pits)</p> <p><input type="checkbox"/> COAL OWNER OR LESSEE</p> <p><input type="checkbox"/> COAL OPERATOR</p> <p><input checked="" type="checkbox"/> WATER PURVEYOR</p> <p><input type="checkbox"/> OPERATOR OF ANY NATURAL GAS STORAGE FIELD</p>	<p>FOR EXECUTION BY A NATURAL PERSON</p> <p>Signature: <u>Charles E. MacDonald LaVerne M. MacDonald</u></p> <p>Print Name: <u>Charles E. MacDonald LaVerne M. MacDonald</u></p> <p>Date: <u>9/1/15</u></p> <p>FOR EXECUTION BY A CORPORATION, ETC.</p> <p>Company: _____</p> <p>By: _____</p> <p>Its: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
---	--

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
September 2, 2015
WV Department of
Environmental Protection
03/24/2017

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

WAIVER

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

Surface Owner Waiver:

I, Charles E. MacDonald and LaVerne M. MacDonald, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>4365463.76</u>
County:	<u>Taylor</u>		Northing:	<u>590886.91</u>
District:	<u>Fetterman</u>	Public Road Access:		<u>US 119</u>
Quadrangle:	<u>Gladesville</u>	Generally used farm name:		<u>MacDonald</u>
Watershed:	<u>White Day Creek</u>			

Name: CHARLES MacDonald
Address: 8818 VICTORIA AVE
GRAFTON, WV 26354

Signature: Charles E. MacDonald
Date: 12/13/16 LaVerne M. MacDonald

Oil and Gas Privacy Notice:

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RECEIVED
Office of Oil and Gas
DEC 16 2016
WV Department of
Environmental Protection

03/24/2017

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: 12/13/2016 **Date Permit Application Filed:** 12/14/2016

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: Mr. Charles MacDonald / <u>Waiver</u>	Name: _____
Address: RR 3 Box 165 Grafton, WV 26354	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: West Virginia	UTM NAD 83 Easting: 590886.81
County: Taylor	Northing: 4365463.76
District: Fetterman	Public Road Access: Rt. 119
Quadrangle: Gladesville 7.5'	Generally used farm name: Charles E. MacDonald
Watershed: White Day Creek	

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: Mountaineer Keystone, LLC	Address: 65 Professional Place, Suite 200
Telephone: 724-940-1204	Bridgeport, WV 26330
Email: ecarder@mkeystone.com	Facsimile: 304-848-9134

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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

DEC 15 2016
WV Department of
Environmental Protection

WW-6RW
(1-12)

MOUNTAINEER KEYSTONE LLC-ERIC LANTZ
65 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-1889
API NO. 47- 091 - 01328
OPERATOR WELL NO. 212
Well Pad Name: UNB

11-473

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL LOCATION RESTRICTION WAIVER

The well operator, Mountaineer Keystone, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

WAIVER

I, Charles E. MacDonald and Laverne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 590886.91
County: Taylor UTM NAD 83 Northing: 4365463.76
District: Fetterman Public Road Access: US 119
Quadrangle: Gladesville Generally used farm name: MacDonald
Watershed: White Day Creek

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED

*Please check all that apply

- EXISTING WATER WELLS
- DEVELOPED SPRINGS
- DWELLINGS
- AGRICULTURAL BUILDINGS

FOR EXECUTION BY A NATURAL PERSON

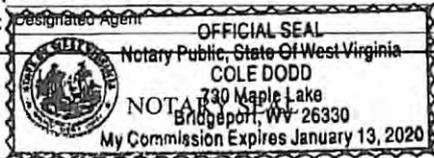
Signature: Charles E. MacDonald and Laverne M. MacDonald
Print Name: Charles E. MacDonald and Laverne M. MacDonald
Date: May 27, 2015

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: Georgianna Thompson
Its: TAYLOR County 02:32:32 PM
Signature: _____
Date: _____
Instrument No 2015014981
Date Recorded 09/31/2015

Well Operator: Mountaineer Keystone, LLC
By: Nathan Skeen
Its: Designated Agent

Signature: _____
Telephone: 724-940-1205
Document Type MIS
Pages Recorded 1
Book-Page 11-473
Recording Fee \$5.00
Annual 2015.00



Subscribed and sworn before me this 27 day of May 2015
COLE DODD Notary Public
My Commission Expires JANUARY 13, 2020

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.

WW-6RW
(1-12)

MOUNTAINEER KEYSTONE LLC-ERIC LANTZ
65 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-1800

API NO. 47- 091 - 01328
OPERATOR WELL NO. 213
Well Pad Name: UNB

11-474

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL LOCATION RESTRICTION WAIVER

The well operator, Mountaineer Keystone, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

WAIVER

I, Charles E. MacDonald and Laverne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 590806.17
County: Taylor UTM NAD 83 Northing: 4365485.5
District: Fetterman Public Road Access: US 119
Quadrangle: Gladesville Generally used farm name: MacDonald
Watershed: White Day Creek

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED

*Please check all that apply

- EXISTING WATER WELLS
- DEVELOPED SPRINGS
- DWELLINGS
- AGRICULTURAL BUILDINGS

FOR EXECUTION BY A NATURAL PERSON

Signature: Charles E. MacDonald, Laverne M. MacDonald
Print Name: Charles E. MacDonald and Laverne M. MacDonald
Date: May 27, 2015

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: Georgianna Thompson
Its: TAYLOR County 02:33:58 PM
Signature: _____
Date: Instrument No 2015014982
Date Recorded 08/31/2015

Well Operator: Mountaineer Keystone, LLC
By: Nathan Skeen
Its: Designated Agent

Signature: _____
Telephone: 724-940-1205

Document Type MIS
Pages Recorded 1
Book-Page 11-474
Recording Fee \$5.00
Additional 2015 \$5.00



Subscribed and sworn before me this 27 day of MAY, 2015.
COLE DODD Notary Public
My Commission Expires JANUARY 13, 2020

Oil and Gas Privacy Notice:

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WV Department of Environmental Protection

03/24/2017

WW-6RW
(1-12)

MOUNTAINEER KEYSTONE LLC-ERIC LAITZ
65 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-1869

API NO. 47-091 - 01328
OPERATOR WELL NO. 214
Well Pad Name: UNB

11-475

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL LOCATION RESTRICTION WAIVER

The well operator, Mountaineer Keystone, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

WAIVER

I, Charles E. MacDonald and Laverne M. MacDonald, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through 23, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 590895.35
County: Taylor UTM NAD 83 Northing: 4365467.22
District: Fetterman Public Road Access: US 119
Quadrangle: Gladesville Generally used farm name: MacDonald
Watershed: White Day Creek

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED

*Please check all that apply

- EXISTING WATER WELLS
- DEVELOPED SPRINGS
- DWELLINGS
- AGRICULTURAL BUILDINGS

FOR EXECUTION BY A NATURAL PERSON

Signature: Charles E. MacDonald Laverne M. MacDonald
Print Name: Charles E. MacDonald and Laverne M. MacDonald
Date: May 27, 2015

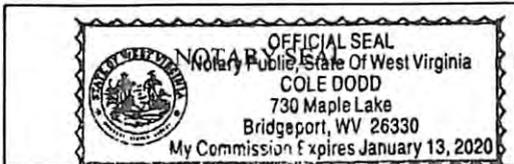
FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: Georgiana Thompson
Its: TAYLOR County 02:35:17 PM
Signature: _____
Date: _____
Instrument No 2015014083

Well Operator: Mountaineer Keystone, LLC
By: Nathan Skeen
Its: Designated Agent

Signature: _____
Telephone: 724-940-1205

Date Recorded: 03/31/2015
Document Type: NIS
Pages Recorded: 1
Book-Page: 11-475
Recording Fee: \$5.00
Additional Fee: \$5.00



Subscribed and sworn before me this 27 day of MAY 2015
COLE DODD Notary Public
My Commission Expires JANUARY 13, 2020

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03/24/2017

WW-6RW
(1-12)

MOUNTAINEER KEYSTONE LLC-ERIC LANTZ
65 PROFESSIONAL PLACE
BRIDGEPORT, WV 26330-1888

API NO. 47- 091 - 01328
OPERATOR WELL NO. 215
Well Pad Name: UNB

11-476

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL LOCATION RESTRICTION WAIVER

The well operator, Mountaineer Keystone, LLC is applying for a permit from the State of West Virginia to conduct oil or gas well work. Please be advised that well work permits are valid for twenty-four (24) months.

Well Location Restrictions

Pursuant to West Virginia Code § 22-6A-12(a), 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.

WAIVER

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State: West Virginia UTM NAD 83 Easting: 590889.52
County: Taylor UTM NAD 83 Northing: 4365469.05
District: Fetterman Public Road Access: US 119
Quadrangle: Gladesville Generally used farm name: MacDonald
Watershed: White Day Creek

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials and I therefore waive all well site restrictions listed under West Virginia Code § 22-6A-12(a).

WELL SITE RESTRICTIONS BEING WAIVED

*Please check all that apply

- EXISTING WATER WELLS
- DEVELOPED SPRINGS
- DWELLINGS
- AGRICULTURAL BUILDINGS

FOR EXECUTION BY A NATURAL PERSON

Signature: Charles E. MacDonald and Laverne M. MacDonald
Print Name: Charles E. MacDonald and Laverne M. MacDonald
Date: May 27, 2015

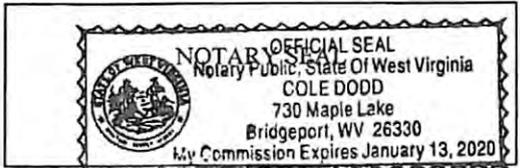
FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
By: _____
Its: Georgianna Thompson
Signature: _____
Date: _____
TAYLOR County 02:36:20 PM
Instrument No 2015014984

Well Operator: Mountaineer Keystone, LLC
By: Nathan Skeen
Its: Designated Agent

Signature: _____
Telephone: 724-940-1205

Date Recorded 06/31/2015
Document Type MIS
Pages Recorded 1
Book-Page 11-476
Recording Fee \$5.00
Additional \$1.00



Subscribed and sworn before me this 27 day of MAY 2015.
COLE DODD Notary Public
My Commission Expires JANUARY 13, 2020

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03/24/2017



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3605

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

August 21, 2015

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 UNB Pad, Taylor County

UNB 211 Well Site
UNB 214 Well Site

UNB 212 Well Site
UNB 215 Well Site

UNB 213 Well Site

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #04-2015-0726 for the subject site to Mountaineer Keystone, LLC for access to the State Road for the well site located off of US 119 T in Taylor County.

The operator has signed a DISTRICT WIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT for DOH District 4 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
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator
Office of Oil and Gas

Cc: Amy L. Miller
Mountaineer Keystone, LLC
CH, OM, D-4
File

DEC 16 2016

WV Department of
Environmental Protection

03/24/2017

WellName UNB #212, 213, 214 and 215			
FRACTURING ADDITIVES			
	PURPOSE	TRADE NAME	CAS #
Additive #1:	Friction Reducer	WFRA-405	Proprietary
Additive #2:	Scale Inhibitor	SI-1000	7440-21-3
Additive #3:	Biocide	BIOCLEAR 2000	25314-61-8
Additive #4:	Gelling Agent	LGC-15	9000-30-0
Additive #5:	Corrosion Inhibitor	AI-300	111-76-2
Additive #6:	Gel Breaker	AP-One	7727-54-0
Additive #7:	Acid	HCl - 7.5%	7647-01-0

RECEIVED
Office of Oil and Gas

DEC 16 2016

WV Department of
Environmental Protection

03/24/2017

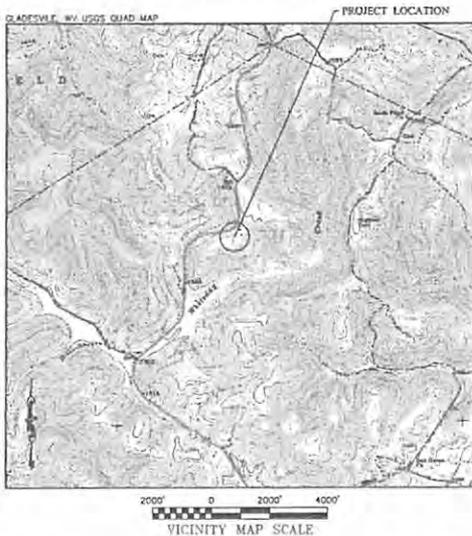
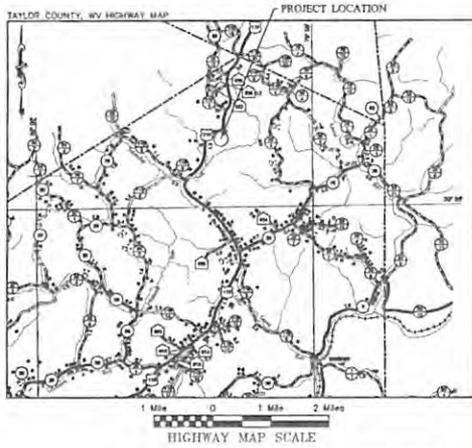


MOUNTAINEER KEYSTONE, LLC

AS-BUILT PLANS FOR THE

UNB WELL PAD AND FLOWBACK PIT

FETTERMEN DISTRICT TAYLOR COUNTY, WV MARCH 2016



TOP HOLE COORDINATES

Well Number	API Number	WVES-N Latitude	WVES-N Longitude	WVES-N Northing	WVES-N Easting	UTM 83-17 Northing	UTM 83-17 Easting
211	47-091-01215	N 39.433912°	W 79.943978°	340466.184 N	1848099.583 E	4365462.07 m	500813.67 m
212	Pending	N 39.433779°	W 79.943928°	340471.621 N	1848114.048 E	4365463.76 m	500866.91 m
213	Pending	N 39.433842°	W 79.943879°	340477.189 N	1848127.892 E	4365465.50 m	500896.17 m
214	Pending	N 39.433957°	W 79.943830°	340482.702 N	1848141.841 E	4365467.22 m	500895.35 m
215	Pending	N 39.433925°	W 79.943781°	340488.201 N	1848155.797 E	4365469.05 m	500899.52 m

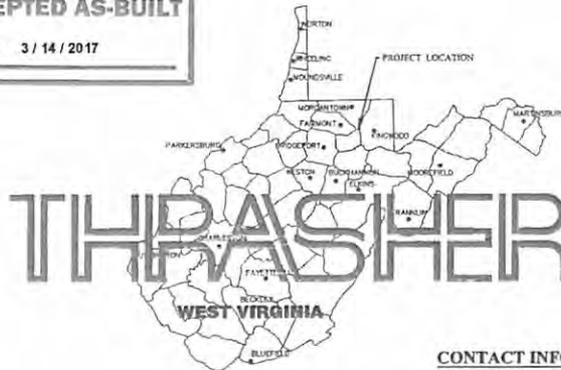
SHEET INDEX

SHEET	DESCRIPTION
1	COVER
2	AS-BUILT OVERALL SITE PLAN
3	AS-BUILT ACCESS ROAD PLAN AND PROFILE
4	AS-BUILT FLOWBACK PIT PLAN
5	AS-BUILT WELL PAD PLAN
6	AS-BUILT FLOWBACK PIT AND WELL PAD PROFILE
7-11	AS-BUILT FLOWBACK PIT AND WELL PAD SECTIONS

I hereby certify that I am a licensed engineer in the State of West Virginia. This As-Built certifies, to the best of my knowledge, information and belief, the Well Pad and Flowback Pit constructed by Dosa Enterprises, in Taylor County, WV on behalf of Mountaineer Keystone, LLC, has been constructed in general conformance to the plans and specifications and, in my professional opinion, is in compliance with applicable laws, codes, and ordinances.

**WVDEP OOG
ACCEPTED AS-BUILT**

WJ 3/14/2017



- APPROVED FOR PERMITS DATE: 08/31/15 BY: RBM
- APPROVED FOR BID DATE: 10/26/15 BY: RBM
- APPROVED FOR CONSTRUCTION DATE: 11/30/15 BY: RBM

CONTACT INFORMATION

THE THRASHER GROUP, INC.
R. BRAD MESSENGER, PE
OFFICE: 304-624-4108
EMAIL: bmessenger@thrashereng.com

MOUNTAINEER KEYSTONE, LLC
EDDIE CARDER
OFFICE: 304-848-9130
EMAIL: ecarder@mkkeystone.com

REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	1-2, 4-10	JW	01/13/17	UPDATED MK CONTACT INFORMATION, ADDED AS-BUILT CHAIN LINK FENCE, GATE, & SAFETY LINE TO THE FLOWBACK PIT, ADDED WELL PAD CELLAR LOCATIONS & DETAILS.

PROPOSED CENTER OF WELL PAD
LAT: 39.434063°
LONG: 79.943997°
WV83 - NF N 340521.512 ft
WV83 - NE E 1843094.803 ft
UTM - 17 N 4365478.824 m
UTM - 17 E 590880.830 m

PROPOSED CENTER OF FLOWBACK PIT
LAT: 39.433634°
LONG: 79.945807°
WV83 - NF N 340367.755 ft
WV83 - NE E 1842582.971 ft
UTM - 17 N 4365439.422 m
UTM - 17 E 590725.633 m

PROPOSED BEGINNING OF PROPOSED ACCESS ROAD
LAT: 39.435715°
LONG: 79.943207°
WV83 - NF N 341129.428 ft
WV83 - NE E 1843320.993 ft
UTM - 17 N 4365665.236 m
UTM - 17 E 590946.632 m

WHITE DAY CREEK WATERSHED

FEMA FLOOD MAP
TAYLOR COUNTY, WV
MAP: 54091
PANEL: 0095 D
SITE OUTSIDE OF MAPPED FLOOD PLAIN

PHONE (304) 624-4108 **THRASHER** (FAX) (304) 624-7831

THE THRASHER GROUP, INC.
800 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330

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CAD FILE: S:\2016-2017 - 08 - 1088 - South - Road - Access - Drawings\Map - Built\UTM - Center - As-Built.dwg PLOT DATE/TIME: 1/17/2017 1:43 PM

CHARLES E. MACDONALD
TM 3 PAR 16

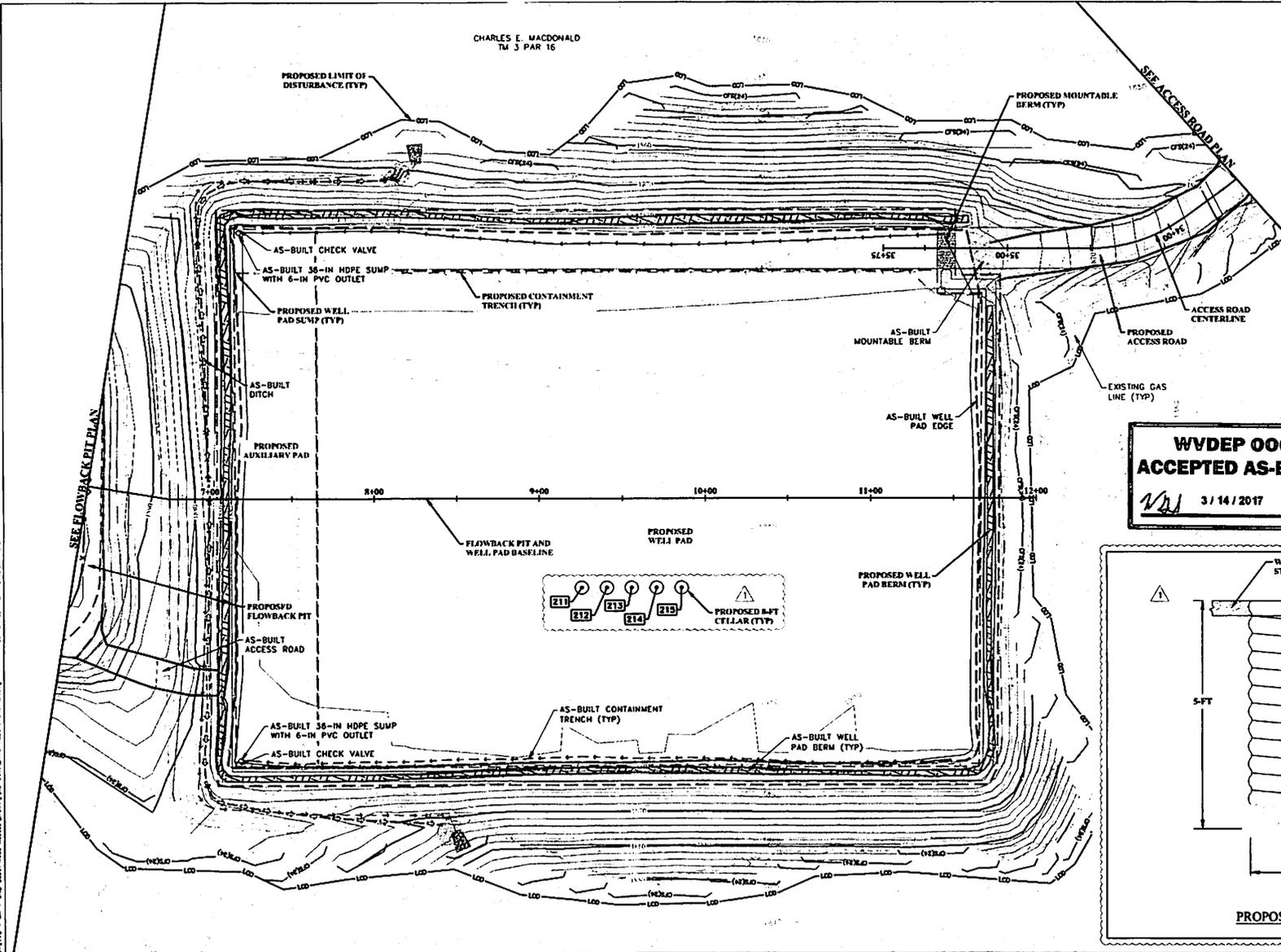
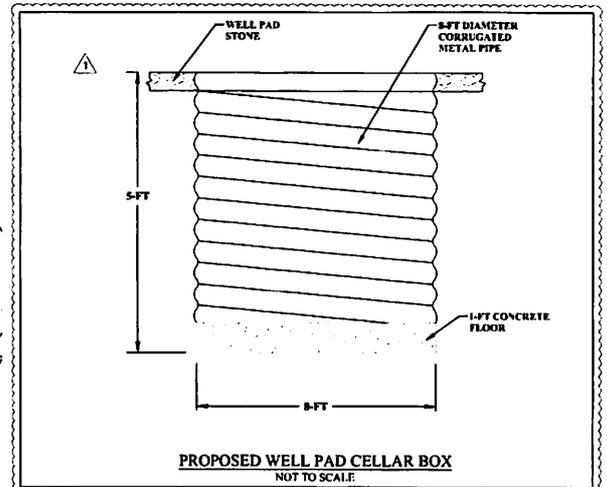
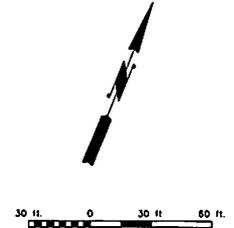
PLAN LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED WELL PAD BERM
- PROPOSED EDGE OF WELL PAD
- PROPOSED EDGE OF ACCESS ROAD
- PROPOSED EDGE OF FLOWBACK PIT
- PROPOSED EDGE OF TYPICAL RTIC & HLF
- PROPOSED EDGE OF STAGING AREA
- PROPOSED EDGE OF AUXILIARY PAD
- AS-BUILT RELIEVE CONTOURS
- AS-BUILT RELIEVE WELL PAD BERM
- AS-BUILT SURVEY EDGE OF PAD
- AS-BUILT SURVEY EDGE OF ROAD
- AS-BUILT SURVEY EDGE OF FLOWBACK PIT
- AS-BUILT SURVEY EDGE OF TOPSOIL STOCKPILE

NOTES

1. EXISTING FEATURES AND CONTOURS ARE BASED ON AERIAL MAPPING PROVIDED BY DMI IN MARCH 2015. MAPPING WAS ESTABLISHED BASED ON LIDAR DATA AND PHOTOGRAPHY FROM 6 APRIL 2014.
2. AS-BUILT SURVEY PERFORMED BY THRASHER IN FEBRUARY AND MARCH 2016.
3. ALL EROSION AND SEDIMENT CONTROLS ARE IN-PLACE AND APPEAR TO BE WORKING PROPERLY.

**WVDEP OOG
ACCEPTED AS-BUILT**
3/14/2017



LAYOUT FILE: 03-09.dwg
 PLOT DATE/TIME: 1/21/2017 2:27 PM
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NO.	BY	DATE	DESCRIPTION
1	JM	01/23/17	ADDED CELLAR LOCATION AND DETAILS

Mountaineer Keystone LLC

SCALE:	DATE:
DRAWN:	CHECKED:
DATE:	DATE:
APPROVED:	DATE:
SUPPLY DATE:	
DRAWN BY:	
FIELD BOOK No.:	

THRASHER
THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD, BRUCEWOOD, WV, 26330
PHONE: (204) 624-4100 FAX: (204) 624-7831

PHASE No.:	
CONTRACT No.:	
PROJECT No.:	101-030-2770

MOUNTAINEER KEYSTONE, LLC
AS-BUILT PLANS FOR UMB
WELL PAD AND FLOWBACK PIT
TAYLOR COUNTY, WV
AS-BUILT WELL PAD PLAN

SHEET No.
5