



 west virginia department of environmental protection

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

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

Tuesday, January 8, 2019
 WELL WORK PERMIT
 Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
 POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for YOCUM MSH 1H
 47-051-02133-00-00

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: YOCUM MSH 1H
 Farm Name: JOSEPH LEE & MICHAEL D. Y
 U.S. WELL NUMBER: 47-051-02133-00-00
 Horizontal 6A New Drill
 Date Issued: 1/8/2019

PERMIT CONDITIONS

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

CONDITIONS

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

PERMIT CONDITIONS

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

WW-6B
(04/15)

4705102133
01/11/2019
API NO. 47-069 -
OPERATOR WELL NO. Yocum MSH 1H
Well Pad Name: Yocum MSH Pad

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

1) Well Operator: SWN Production Co., LLC 494512924 051-Marshall 07-Liberty 438-Littleton
Operator ID County District Quadrangle

2) Operator's Well Number: Yocum MSH 1H Well Pad Name: Yocum MSH Pad

3) Farm Name/Surface Owner: Joseph Lee & Michael D. Yocum Public Road Access: Amos Hollow Road

4) Elevation, current ground: 1052' Elevation, proposed post-construction: 1053.4'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

JW
10/31/18

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Up-Dip Well to The North, Target Top TVD- 7064', Target Base TVD- 7101', Anticipated Thickness- 37', Associated Pressure- 4616

8) Proposed Total Vertical Depth: 7082'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19413'

11) Proposed Horizontal Leg Length: 11,881.86'

12) Approximate Fresh Water Strata Depths: 438'

13) Method to Determine Fresh Water Depths: Deepest water well ID'd is Vellekoop, Peter V. (depth of 180.7', subsea elevation of 642'), equating to a 438' TVD at the pad site. Logs for salinity analysis planned.

14) Approximate Saltwater Depths: 895' Depth is based on mapping the elevations of the Pottsville sandstone in the surrounding area. Logs will be run on the 1st well on the pad for salinity analysis.

15) Approximate Coal Seam Depths: 844'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

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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WW-6B
(04/15)

4705102133
API NO. 47-069 - 04/11/2019

OPERATOR WELL NO. Yocum MSH 1H
Well Pad Name: Yocum MSH Pad

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	530'	530'	506 sx/CTS
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J-55	36#	2422'	2422'	936 sx/CTS
Production	5 1/2"	New	HCP-110	20#	19413'	19413'	lead 594sx/Tall 3206sx/ 100 Inside Interm
Tubing							
Liners							

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10/31/18

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	See	Interm	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/50% Excess
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

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10/31/18

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface or run external casing packer/cementing stage tool above void interval and perform 2 stage cementing operation dependent upon depth of void. Run casing not less than 20' below void nor more than 75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts.)

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

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 27.93

22) Area to be disturbed for well pad only, less access road (acres): 16.97

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

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

See Attachment ***

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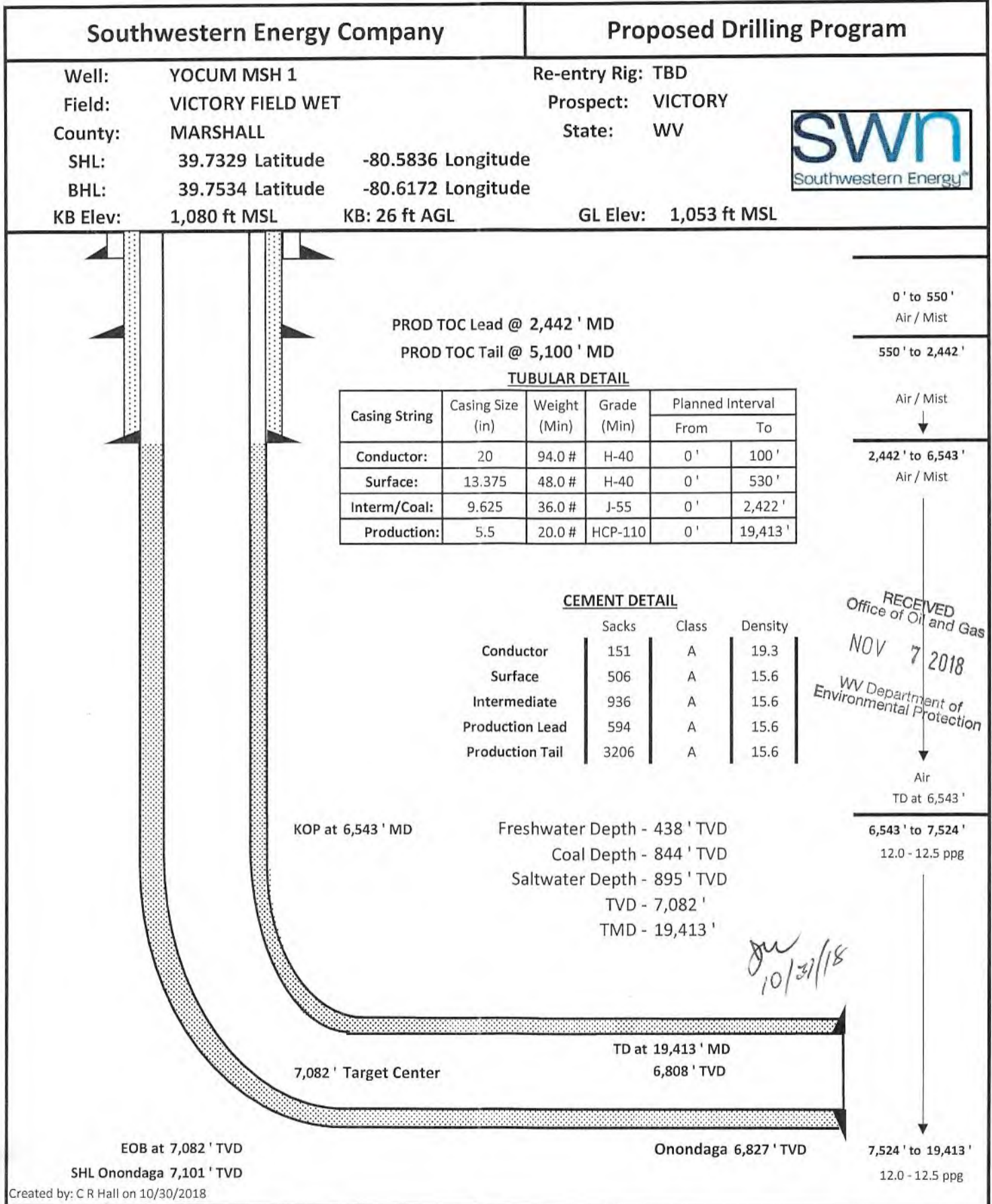
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25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

*Note: Attach additional sheets as needed.

01/11/2019



Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Surface Intermediate	S001	accelerator	calcium chloride up to 3%	10043-52-4
	S001	accelerator	calcium chloride	10043-52-4
Kick Off Plug	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
	D801	retarder	aromatic polymer derivative	proprietary
	D047	antifoam	polypropylene glycol	25322-69-4
Production-Lead	D167	fluid loss	aliphatic amide polymer	proprietary
	D154	extender	non-crystalline silica	7631-86-9
	D400	gas migration	boric acid	10043-35-3
	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D201	retarder	chrystalline silica	14808-60-7
			metal oxide	proprietary
D202	dispersant	sulphonated synthetic polymer formaldehyde (impurity)	proprietary proprietary	
Production-Tail	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D167	fluid loss	aliphatic amide polymer	proprietary
	D065	dispersant	sodium polynaphthalene sulfonate	9008-63-3
			sodium sulfite	7757-82-6
	D201	retarder	chrystalline silica	14808-60-7
metal oxide			proprietary	
D153	anti-settling	chrystalline silica	14808-60-7	

Rev. 5/18/2018

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**YOCUM MSH 1H
Area of Review**

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
4705130388	Manufactures Light & Heat Co	Plugged	39.73442	-80.587457	Not Available	Not Available	Not Available
4705100281	Columbia Gas Transmission Corp.	Plugged	39.73848	-80.595158	1997	Big Injun	Not Available
4705100455	Manufactures Light & Heat Co	Completed	39.75129	-80.616576	2285	Big Injun	Not Available
4705100478	Manufactures Light & Heat Co	Plugged	39.753755	-80.616953	1775	Big Injun	Not Available
4705100763	Columbia Gas Transmission, LLC	Plugged	39.751695	-80.613662	2667	Fifth	Not Available
4705100764	Carnegie Natural Gas Co.	Plugged	39.750855	-80.61357	3238	Gordon Stray	Not Available
4705130421	Manufactures Light & Heat Co	Completed	39.737465	-80.593843	Not Available	Not Available	Not Available
4705170156	Carnegie Natural Gas Co.	Completed	39.754045	-80.618831	2807	Gordon	Not Available
4705170157	Carnegie Natural Gas Co.	Completed	39.75216	-80.616576	3238	3rd Sand Salt	Not Available
4705170427	Not Available	Not Available	39.752559	-80.616417	Not Available	Not Available	Not Available

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WW-9
(2/15)

API Number 47 - 069 - _____
Operator's Well No. Yocum MSH 1H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Fish Creek Quadrangle Littleton

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 34-155-22403, 34-059-24067, 34-119-28776, 34-167-23862, 34-166-23795, 34-121-23995, 34-155-21893)
- Reuse (at API Number _____ at next anticipated well, API# will be included with the WR-34/DDMR &/or permit addendum.)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility)

Will closed loop system be used? If so, describe: Yes- See Attachment 3C

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air drill to KOP, fluid drill with SOB from KOP to TD

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

Additives to be used in drilling medium? Attachment 3A

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) _____

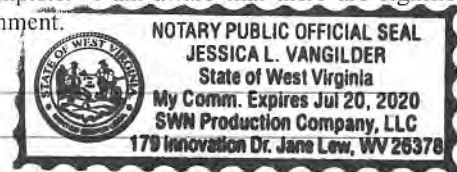
-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021
Arden Landfill 10072, Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013, Valley 100280

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 Brittany Woody
Company Official (Typed Name) Brittany Woody
Company Official Title Regulatory Analyst



Subscribed and sworn before me this 6th day of November, 20 18
Jessica L. Vangilder Notary Public
My commission expires Jul 20, 2020



4705102133

01/11/2019

Form WW-9

Operator's Well No. Yocum MSH 1H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 27.93 Prevegetation pH _____

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 16.97

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

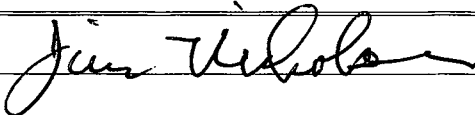
Attachment 3B

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: _____



Comments: _____

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Title: Oil and Gas Inspector

Date: 10/21/18

Field Reviewed?

Yes

No

Attachment 3A

Drilling Mediums

Surface/Coal(if present)/Freshwater Intervals:

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

Brine (In Gas Storage areas)

Organophilic Bentonite

Production Hole:

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification

R^L → V⁺
A

To Order Seed contact Lyndsi Eddy Flippo office 570-996-4271 cell 501-269-5451 lyndsi_eddy@swn.com (please allow 7 to 10 days for delivery)

NON-ORGANIC PROPERTIES		
Seed Mixture: ROW Mix	SWN Supplied	
Orchardgrass	40%	
Timothy	15%	
Annual Ryegrass	15%	
Brown Top Millet	5%	
Red Top	5%	
Medium Red Clover	5%	All legumes are innoculated at 5x normal rate
White Clover	5%	
Birdsfoot Trefoil	5%	
Rough Bluegrass	5%	
Apply @ 100lbs per acre April 16th- Oct. 14th		Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat

SOIL AMENDMENTS	
10-20-20 Fertilizer	*Apply @ 500lbs per Acre
Pelletized Lime	Apply @ 2 Tons per Acre
*unless otherwise dictated by soil test results	

Seeding Calculation Information:
1452' of 30' ROW/LOD is One Acre
871' of 50' ROW/LOD is One Acre
622' of 70' ROW/LOD is One Acre

Synopsis:
Every 622 linear feet in a 70' ROW/LOD, you should be using (2) 50lb bags of seed, (4) 50lb bags of fertilizer and (80) 50lb bags of Lime (2x seed in winter months + 50lb Winter Wheat/ac).

Special Considerations:
Landowner Special Considerations including CREP program participants require additional guidance that is not given here. Discuss these requirements with SWN supervision at the beginning of the project to allow time for special seed delivery.

ORGANIC PROPERTIES	
Seed Mixture: SWN Production Organic Mix	SWN Supplied
Organic Timothy	50%
Organic Red or White Clover	50%
OR	
Organic Perennial Ryegrass	50%
Organic Red or White Clover	50%
Apply @ 100lbs per acre April 16th- Oct. 14th	
Organic Fertilizer @ 200lbs per Acre	
Apply @ 200lbs per acre Oct. 15th- April 15th	
Pelletized Lime @ 2 Tons per Acre	

WETLANDS (delineated as jurisdictional wetlands)	
Seed Mixture: Wetland Mix	SWN Supplied
VA Wild Ryegrass	20%
Annual Ryegrass	20%
Fowl Bluegrass	20%
Cosmos 'Sensation'	10%
Redtop	5%
Golden Tickseed	5%
Maryland Senna	5%
Showy Tickseed	5%
Fox Sedge	2.5%
Soft Rush	2.5%
Woolgrass	2.5%
Swamp Verbena	2.5%
Apply @ 25lbs per acre April 16th- Oct. 14th	
Apply @ 50lbs per acre Oct. 15th- April 15th	
NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	

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Attachment 3C

CLOSED LOOP SYSTEM

The closed loop system is designed to eliminate the use of reserve pits by providing a higher level of solids control processing and using steel pits for capture of drill cuttings. The cuttings are then processed to achieve landfill requirements before hauling to approved landfills. The liquids are processed to recycle into the active mud system or to transfer to onsite temporary storage as needed.

The closed loop system consists of several sets of a shale gas separator (often called a 'methana'), several banks of solids shakers, high speed centrifuges (1 or 2) used to process the fluid portion of the mud system to remove low gravity solids, low speed centrifuge used for barite recovery in high weight liquid drilling systems, a dewatering system (for air intervals and if freshwater mud systems are in use) used to further clean liquids by flocculation and additional mechanical separation, associated open top tanks for processing liquids and capturing solids for disposal, and transfer pumps to move fluids through the processes. There is an area adjacent to the cuttings tanks (Red Zone) where a track hole is utilized to recover the processed cuttings for loading into containers for hauloff. (See attached schematic of a generic closed loop system layout)

Below are discussions of the processes used when drilling the air interval or liquids interval.

AIR DRILLING INTERVALS

During air drilling operations, flow from the rig will pass down the flowline to the Shale Gas Separator (sometimes called a methane) where gas and liquids/solids are separated. Gas is sent to the flare scrubber tank and is flared at the flare stack. Solids and fluids pass across a shaker system to separate solids from liquids. Solids pass into the cuttings tanks where they are captured for drying and hauloff to an approved landfill site. Liquids fall into a shaker tank and are collected by a centrifugal pump to be processed by the high speed centrifuge to further separate liquids and solids. Solids are then dumped into the cuttings tank for drying and hauloff. Liquids are further processed to remove additional low gravity solids before being reused or transferred to onsite storage.

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

When drilling is converted to liquids drilling, the shale gas separator and associated shaker tank are bypassed, and the liquids system is processed over the primary and drying shaker systems. Cuttings drop into the cuttings tank for additional processing. Any recoverable associated liquids attached to the cutting are recovered out the tank and processed through the low gravity (high speed) and barite recovery centrifuges (low speed) to further remove low gravity solids and to recover barite for reuse in the mud systems.

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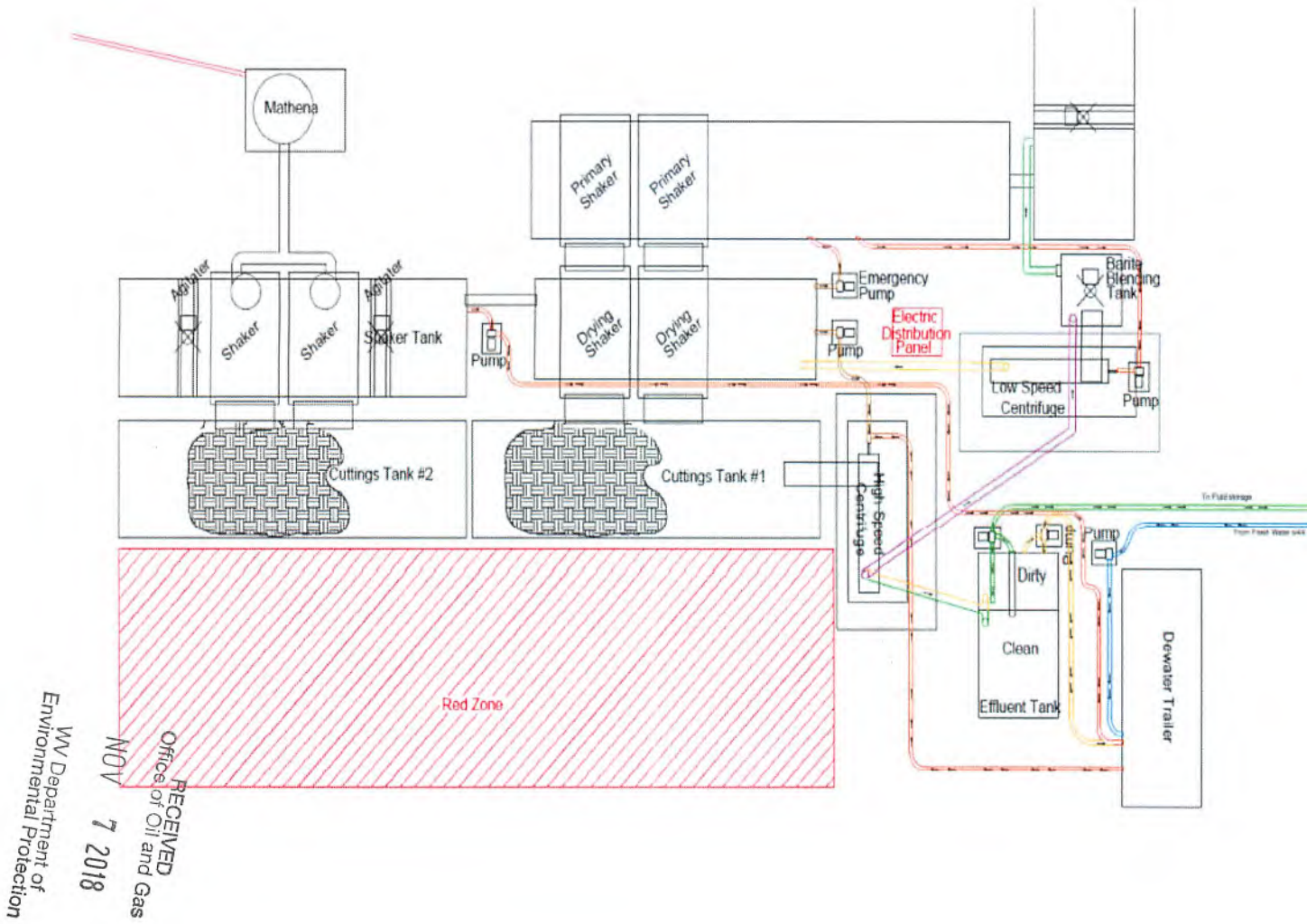
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Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM



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MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



SWN Production Company, LLC
179 Innovation Drive
Jane Lew, West Virginia 26378

API NO. 47-XXX-XXXXX
WELL NAME: Yocum MSH 1H
Littleton QUAD
Liberty DISTRICT
Marshall County, WEST VIRGINIA

Submitted by:

Brittany Woody
Brittany Woody _____ Date: 10/18/2018

Title: Regulatory Analyst SWN Production Co., LLC

Approved by:

Jim Tucker
_____ Date: 10/31/18

Title: Oil & Gas Inspector

Approved by:


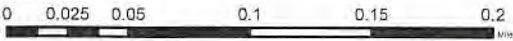
_____ Date: _____

Title: _____



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01/11/2018





 1 in = 417 ft


 Coordinate System: NAD 1983 UTM Zone 17N
 Units: Meter

 Water Well
 1500' Buffer

 Coordinates: 39.732795, -80.583668

Water Purveyor Map
 Well Pad: Yocum
 County: MSH
 *R_L → V⁺*
 Southwestern Energy®
 Date: 4/19/2018 Author: willisb

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Latitude: 39°45'00" (LITTLETON) SHL 134'

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

SURFACE HOLE LOCATION (SHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,398,196.511
EASTING: 535,684.289

LANDING POINT LOCATION (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,398,039.965
EASTING: 535,484.110

BOTTOM HOLE LOCATION (BHL):

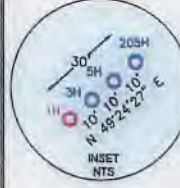
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,400,460.887
EASTING: 532,790.579

Latitude: 39°47'30" (CAMERON)

BHL 9526'

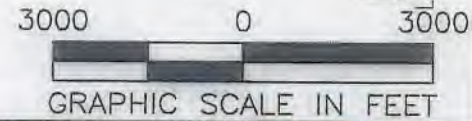
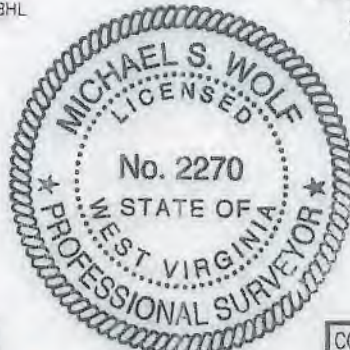
TRACT	SURFACE OWNER	TAX PARCEL
1	JOSEPH LEE & MICHAEL D. YOCUM (S/R)	7-26-9
2	JOSEPH LEE & MICHAEL D. YOCUM	7-27-4
3	DELORSE A. HORNER	7-26-10
4	CONSOLIDATED GAS SUPPLY CORPORATION	7-26-8
5	W. VA WILDLIFE RESOURCES SECTION	7-24-1
6	JAMES E. MORGAN	7-26-14
7	M. PEGGY GRIBBIN REVOC. LIVING TRUST	7-19-28
8	M. PEGGY GRIBBIN REVOC. LIVING TRUST	7-19-29
9	DELORSE A. HORNER	7-19-30
10	JOHN M. & TERESA L. HORNER	7-19-12
11	MASON DIXON FARMS LLC	7-19-8.8
12	MASON DIXON FARMS LLC	7-19-1
13	MICHAEL T. & CARLA M. WHITEMORE	7-19-8.7
14	CAROLYN RUTH FRANCIS	7-19-7
15	MASON DIXON FARMS, LLC	7-19-6

LINE	BEARING	DISTANCE
L1	N 53°23'28" W	2278.91'
L2	N 15°17'19" E	2590.04'
L3	S 51°58'25" W	833.73'



- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 - SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)

OPERATOR'S WELL #: YOCUM MSH 1H
API WELL #: 47 STATE 051 COUNTY 02133 PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: FISH CREEK
DISTRICT: LIBERTY COUNTY: MARSHALL
SURFACE OWNER: JOSEPH LEE AND MICHAEL D. YOCUM
OIL & GAS ROYALTY OWNER: JOSEPH LEE AND MICHAEL D. YOCUM

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,082 TVD 19,413 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND:	REVISIONS:	DATE:
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— SURVEYED BOUNDARY	10-24-2018
⊙ EXISTING / PRODUCING WELLHEAD	— DRILLING UNIT	
LPL LANDING POINT LOCATION	----- LEASE BOUNDARY	
⊙ EXISTING WATER WELL	— PROPOSED PATH	
⊙ EXISTING SPRING		
		DRAWN BY: K. POTH
		SCALE: 1" = 2000'
		DRAWING NO: 030-3170
		WELL LOCATION PLAT



THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

01/11/2019

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	JOHN M & LISA A BUTLER	7-26-11.1
B	HUNDRED RESOURCES INC	7-26-11
C	MASON DIXON FARMS, LLC	7-19-8.9
D	JOSEPH D'ANDREA SR	7-19-8.2
E	TERESA LYNETTE POPECK	7-19-2
F	MICHAEL E & DONALD D RICHARDS	7-19-3
G	CAROLYN JO MORRIS	7-19-5
H	LAWRENCE PAUL CHAMBERS	7-19-39
I	WALTER A GUZEK JR ET AL	7-19-41
J	RODNEY J WALLACE ET UX	7-19-40
K	JEREMIAH & ANDREA MAGERS	7-19-9
L	JEREMIAH & ANDREA MAGERS	7-19-8.1
M	DIANE LEE RINE	7-19-11
N	JEREMIAH & ANDREA MAGERS	7-19-8
O	RICHARD H KESTEL & EDWARD J SILCOX	7-16-12
P	LARRY M MYER ET UX	7-16-15
Q	ROBERT L MICKEY	7-16-9
R	JOHN C & SONIA M RICHARDS	7-19-13
S	JOHN C & SONIA M RICHARDS	7-19-14
T	STEVEN D & SHERRI A ZELIC	7-19-16
U	JOHN M & TERESA L HORNER	7-19-17
V	CHURCH OF CHRIST TRUSTEES	7-19-25
W	JAMES REGIEC SR ET AL	7-19-24
X	JAMES REGIEC SR ET AL	7-19-23.1
Y	JAMES E Jr & GINGER REGIEC	7-19-23.2
Z	JAMES F & JAMIE ANN DRUSCHEL ET AL	7-19-23
AA	GAIL CUMPSTON	7-19-20
BB	LORETTA J FRANCIS	7-27-4.2
CC	MICHAEL DAVID YOCUM ET AL	7-27-4

REVISIONS:

COMPANY:		 	
OPERATOR'S		YOCUM MSH	
WELL #:		1H	
DISTRICT:	COUNTY:	STATE:	DATE: 10-24-2018
LIBERTY	MARSHALL	WV	DRAWN BY: K. POTH
			SCALE: N/A
			DRAWING NO: 030-3170
			WELL LOCATION PLAT 2

WW-6A1
(5/13)

Operator's Well No. YOCUM MSH 1

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Exhibit "A"				

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

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

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

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

Well Operator: SWN Production Company, LLC.
 By: *Brandi Wilkins*
 Its: *Staff Landman*

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, L.L.C., Operator
Yocum 1H
Marshall County, West Virginia

01/11/2019

Tract No.	Tax Parcel	Lessor	Lessee	Royalty	BK/PG	Interest Not Leased by Southwestern Production Company, LLC
1	7-26-9	W.E. Franklin, Ira M. Franklin & Emma Franklin, husband and wife, John A. Franklin & Mollie Franklin, husband and wife, Mary S. Franklin, widow, M.J. Brooks & Clint Brooks, wife and husband, Edith White & J.F. White, wife and husband, and Laura Franklin, widow	L.F. Burley	12.50%	186/284	0.0000%
		L.F. Burley	The Manufacturers Light and Heat Company		2/369	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
	7-26-9	Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		36/422	
		I.D. Franklin and Bessie J. Franklin, husband and wife	The Manufacturers Light and Heat Company	12.50%	209/168	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281			
Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63			
Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110			
2	7-27-4	I.D. Franklin and Bessie J. Franklin, husband and wife	The Manufacturers Light and Heat Company	12.50%	209/168	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110			
3	7-26-10	Lorraine E. Parriott, acting as Trustee for the Parriott Family Trust dated July 23, 1996, and Lorraine E. Parriott, a widow	Chesapeake Appalachia, L.L.C.	12.50%	669/23	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
4	7-26-8	Roger G. Rulong, Sr., aka Roger G. Rulong and Jane KUnknownle Rulong aka Jane K. Rulong, his wife	Chesapeake Appalachia, L.L.C.	12.50%	694/477	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Nancy Wallace Shuman aka Nancy W. Shuman, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	693/606	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Edward Strausser, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	694/341	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Roger G. Rulong, Jr.	Chesapeake Appalachia, L.L.C.	12.50%	694/475	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Shirley Redd and James Redd, her husband	Chesapeake Appalachia, L.L.C.	17.00%	730/198	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Joan Marling aka Jo Ann Marling, a widow	Chesapeake Appalachia, L.L.C.	17.00%	730/208	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Jeanette Lilley, a widow	Chesapeake Appalachia, L.L.C.	17.00%	730/213	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Evelyn Bane, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17.00%	730/218	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	Sharon Hodorowski, fka Sharon Facello, and Frank Hodorowski, her husband	Chesapeake Appalachia, L.L.C.	17.00%	732/385	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-8	William E. Phillips and Nancy G. Phillips, his wife	Chesapeake Appalachia, L.L.C.	17.00%	733/610	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
7-26-8	Kathy L. Pierce, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17.00%	740/6		
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		
7-26-8	Amber D. Colvin, a single woman	Chesapeake Appalachia, L.L.C.	17.00%	740/85		
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		
7-26-8	Chestnut Holdings, Inc., a Florida Corporation	Chesapeake Appalachia, LLC	17.00%	766/605		
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		
7-26-8	Hundred Resources Inc.	Chesapeake Appalachia, LLC	17.00%	769/581		
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		

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Tract No.	Tax Parcel	Lessor	Lessee	Royalty	BK/Pg	Interest Not Leased by Southwestern Production Company, LLC
7-25-8		Loran William Wallace, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	12.50%	692/345	
7-26-8		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
7-26-8		Clifford Rulong, a single man	SWN Production Company, LLC	16.00%	953/423	
7-26-8		Shelia V. Rulong, a widow	SWN Production Company, LLC	16.00%	953/592	
5	p/o 7-24-1	Elijah Allman and Mary J. Allman	The Wheeling Natural Gas Company	12.50%	130/435	0.0000%
		The Wheeling Natural Gas Company	The Manufacturers Light and Heat Company		3/40 148/389	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC		650/63	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
5	p/o 7-24-1	Royalty Owners	n/a			8.5350%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Olive M. Martin SASP and Barry A. Martin SASP	Chesapeake Appalachia, LLC	12.50%	687/95	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Martha McCracken, a widow	Chesapeake Appalachia, LLC	17%	747/234	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Basil F. McCracken and Dorothy McCracken, his wife	Chesapeake Appalachia, LLC	12.50%	742/158	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Juanita Pearl McCracken, a single woman, by her guardian, Erin Bitz Simpson	Chesapeake Appalachia, LLC	17%	742/116	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Robert McCracken, married, SASP	Chesapeake Appalachia, LLC	15.00%	955/204	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Juanita Pearl McCracken, a single woman, by her guardian, Erin Bitz Simpson	Chesapeake Appalachia, LLC	17%	742/116	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Stephanie Bitz, a single woman	Chesapeake Appalachia, LLC	12.50%	742/513	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Juanita Pearl McCracken, a single woman, by her guardian, Erin Bitz Simpson	Chesapeake Appalachia, LLC	17%	742/116	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Erin Simpson, f/k/a Erin Bitz and Matt Simpson, her husband	Chesapeake Appalachia, LLC	12.50%	742/518	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Juanita Pearl McCracken, a single woman, by her guardian, Erin Bitz Simpson	Chesapeake Appalachia, LLC	17%	742/116	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Anna Lucy McCracken, a single woman	Chesapeake Appalachia, LLC	17%	744/90	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Rolland Dean McCracken aka Rolland D. McCracken, a single man, by his Attorney-In-Fact, Rebecca Jo Kuzba	Chesapeake Appalachia, LLC	17%	747/228	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Debbie Coleman, a single woman	Chesapeake Appalachia, LLC	17%	742/200	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Linda Turner and Dennis Turner, her husband	Chesapeake Appalachia, LLC	17%	742/523	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Gary Scott, a single man	Chesapeake Appalachia, LLC	17%	742/533	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	David Scott and Janet May Scott, his wife	Chesapeake Appalachia, LLC	17.00%	742/528	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Wanda M. Frazee aka Wanda Marie Frazee fka Wanda M. Maxwell fka Wanda Marie Maxwell fka Wanda M. Maxwell, a widow	Chesapeake Appalachia, LLC	17.00%	722/495	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	O. E. Burge and Sarah Lou Burge, his wife and Stephen Burge, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	18.75%	708/137	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Connie J. Brown, a widow	SWN Production, LLC	15.00%	931/427	
	p/o 7-24-1	Chestnut Holdings, a Florida corporation	Chesapeake Appalachia, LLC	17.00%	723/625	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	p/o 7-24-1	Lawrence Leroy Frye, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	17.00%	715/481	

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Tract No.	Tax Parcel	Lessor	Lessee	Royalty	BK/PG	Interest Not Leased by Southwestern Production Company, LLC
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Erma Jean Carr, a widow	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 758/372	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Harold Carr and Loraine Carr, his wife	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 758/366	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Alton Carr, a single man	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 758/354	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Beatrice Criss, a single woman	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 758/318	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Dolrice Boyd and Robert Boyd, her husband	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 758/378	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Charles Albert Sloan, a married man dealing in his sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 709/101	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Dorothy Lynn Newell, a married woman dealing in her sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 715/535	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Robert Bissett, divorced	SWN Production Company, LLC SWN Production, LLC	15.00%	33/110 942/504	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Richard Bissett, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	925/537	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Rena Kolton, a married woman dealing in her sole and separate property	SWN Production, LLC	17.00%	916/509	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Alma Lovene Sampson, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC	17.00%	716/322	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Imogene Verna Chambers aka Verna Imogene Chambers, a widow	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 716/360	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Lawrence Leroy Frye, a married man dealing in his sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 715/481	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. David Lee Frye, a married man dealing in his sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 716/141	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Rickle Gene Frye, a married man dealing in his sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 716/146	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Pamela S. Cunningham, a married woman dealing in her sole and separate property	SWN Production Company, LLC Chesapeake Appalachia, LLC	17.00%	33/110 717/007	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Chester Guzek, widower, Life Estate and Amy Jo Simpson, a married woman dealing in her sole and separate property, Remainderman, and Chester Craig Guzek, a married man dealing in his sole and separate property	SWN Production Company, LLC SWN Production, LLC	15.00%	33/110 916/501	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Linda Suzette Sills and Michael J. Sills, her husband	SWN Production, LLC	15.00%	916/497	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Anne Campbell Gleine, a married woman dealing in her sole and separate property	SWN Production, LLC	15.00%	919/155	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Tabitha L. Allen, n/k/a Tabitha L. Marling, a married woman dealing in her sole and separate property	SWN Production, LLC	15.00%	931/424	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Theo Sue Mager, a married woman dealing in her sole and separate property	SWN Production, LLC	15.00%	916/499	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Terry Cumpston, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	916/512	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Wanda M. Woodruff, a.k.a. Wanda Mae Woodruff, a widow	SWN Production, LLC	15.00%	916/516	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Glen Kermit Wendt, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	916/491	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Norma L. Williams, married and dealing in her sole and separate property	SWN Production, LLC	15.00%	919/157	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Maria Bel, a single woman	SWN Production, LLC	15.00%	916/519	
p/o 7-24-1		Chesapeake Appalachia, L.L.C. Frederick Komorowski, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	945/430	

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Tract No.	Tax Parcel	Lessor	Lessee	Royalty	BK/PG	Interest Not Leased by Southwestern Production Company, LLC
	p/o 7-24-1	Gary F. Cheon, a married man dealing in his sole and separate property	SWN Production, LLC	18.00%	945/411	
	p/o 7-24-1	Marlene DeMarco, a widow	SWN Production, LLC	18.00%	955/342	
	p/o 7-24-1	Mary Martha Leichter, married, dealing in her sole and separate property	SWN Production, LLC	18.00%	935/289	
	p/o 7-24-1	Chad Chaplin, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	935/226	
	p/o 7-24-1	Harry Riter, Jr., a single man	SWN Production, LLC	15.00%	952/100	
	p/o 7-24-1	Violet Rose Menas, a widow	SWN Production, LLC	15.00%	945/426	
	p/o 7-24-1	Terry Riter, a single man	SWN Production, LLC	15.00%	935/237	
	p/o 7-24-1	Merl Chaplin a married man dealing in his sole and separate property	SWN Production, LLC	16.00%	961/185	
	p/o 7-24-1	James R. Chaplin, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	955/555	
	p/o 7-24-1	Ralph Chaplin, a married man dealing in his sole and separate property	SWN Production, LLC	15.00%	935/228	
	p/o 7-24-1	Floyd Kevin Chaplin	SWN Production, LLC	17.00%	1010/190	
	p/o 7-24-1	Dana Sue Magers	SWN Production, LLC	17.00%	1010/276	
6	7-26-14	Mildred Pyle Strausser and Earl Strausser, her husband	The Manufactures Light and Heat Company	12.50%	353/83	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	7-26-14	Jack Cooper Wallace, divorced	SWN Production Company, LLC	17.00%	950/51	
	7-26-14	Dan Foster Wallace, a married man dealing in his sole and separate property	SWN Production Company, LLC	17.00%	950/46	
	7-26-14	Pamela Sue Wallace, a widow	SWN Production Company, LLC	17.00%	950/56	
7	7-19-28	James W. Whipkey, single	Chesapeake Appalachia, LLC	12.50%	655/5	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		35/32	
	7-19-28	O. E. Burge, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	12.50%	654/382	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
8	7-19-29	Kinsey A. Kiger and Carole E. Kiger, his wife	Chesapeake Appalachia, LLC	12.50%	660/36	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
9	7-19-30	Sydney Clark Merritt, f/k/a Sydney Ann Clark, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC	12.50%	658/490	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-30	Charles L Ackerman, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	12.50%	663/305	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-30	Charlotte Ackerman, a single woman	Chesapeake Appalachia, LLC	12.50%	662/624	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-30	Arthur Manning Clark, a single man	Chesapeake Appalachia, LLC	12.50%	665/297	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-30	Mary D Garrett, a widow	Chesapeake Appalachia, LLC	12.50%	690/223	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
10	7-19-12	J.P. Reid, guardian of Elsie Alvarena Miller, a minor, Albert Miller and Anna M. Miller, his wife, George M. Miller and Ottilia Miller, his wife, Edward Bowl and Myrtle Rowlands, his wife, and Albert Beebe and Della Beebe, his wife	The Manufactures Light and Heat Company	12.50%	160/360	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-8.8	John C. Richards and Sonia M. Richards, his wife	Chesapeake Appalachia, LLC	12.50%	659/591	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-8.8	Stephen W. Burge and Judith A. Burge, his wife	Chesapeake Appalachia, LLC	12.50%	659/203	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
12	7-19-1	John Malcomb Hinds and Mary L Hinds, his wife	Chesapeake Appalachia, LLC	12.50%	660/421	0.0000%
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-1	William K Walton, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	12.50%	660/418	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
	7-19-1	Charles W Dobbs and Judith M Dobbs, his wife	Chesapeake Appalachia, LLC	12.50%	660/586	

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Tract No.	Tax Parcel	Lessor	Lessee	Royalty	BK/PG	Interest Not Leased by Southwestern Production Company, LLC
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Tammy Holstein, a/k/a Tammy Hinds and Brian Holstein, her husband	Chesapeake Appalachia, LLC		662/01	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Kathleen D Baker and John A Baker, her husband	Chesapeake Appalachia, LLC		661/648	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Robert W Lewis and Patricia M Lewis, his wife	Chesapeake Appalachia, LLC		662/04	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Nancy F Patterson, a divorced woman dealing in her sole and separate property	Chesapeake Appalachia, LLC		662/55	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Nina M Taylor, a widow	Chesapeake Appalachia, LLC		664/335	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Sualla Baresford Dockendorf, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC		664/389	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Hayhurst Company, a Florida Partnership	Chesapeake Appalachia, LLC		667/397	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		William Taylor Baresford, a single man	Chesapeake Appalachia, LLC		669/13	
7-19-1		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Robert N Hinds, Jr, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC		669/16	
13	7-19-8.7	Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Stephen W. Burge and Judith A. Burge, his wife	Chesapeake Appalachia, LLC		659/203	
7-19-8.7		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		John C. Richards and Sonia M. Richards, his wife	Chesapeake Appalachia, LLC		659/591	
14	7-19-7	Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Stephen W. Burge and Judith A. Burge, his wife	Chesapeake Appalachia, LLC		659/203	
7-19-7		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		John C. Richards and Sonia M. Richards, his wife	Chesapeake Appalachia, LLC		659/591	
15	7-19-6	Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		Stephen W. Burge and Judith A. Burge, his wife	Chesapeake Appalachia, LLC		659/203	
7-19-6		Chesapeake Appalachia, LLC	SWN Production Company, LLC	12.50%	33/110	
		John C. Richards and Sonia M. Richards, his wife	Chesapeake Appalachia, LLC		659/591	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	

01/11/2019

October 18, 2018

Ms. Laura Adkins
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

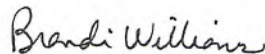
RE: SWN's proposed New Well: Yocum MSH 1H in Marshall County, West Virginia, Drilling under Co Hwy 74/2.

Dear Ms. Adkins:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Co Hwy 74/2. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Sincerely,



Brandi Williams, CPL
Staff Landman
SWN Production Company, LLC

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

Date of Notice Certification: 11/6/18

API No. 47- 069 - _____
Operator's Well No. Yocum MSH 1H
Well Pad Name: Yocum MSH Pad

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>535684.289</u>
County: <u>051-Marshall</u>	UTM NAD 83 Northing: <u>4398196.511</u>
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Road</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Yocum</u>
Watershed: <u>Fish Creek</u>	

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p align="center">OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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Required Attachments:

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

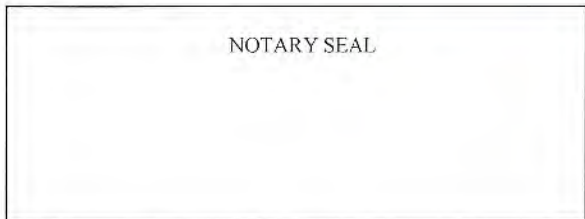
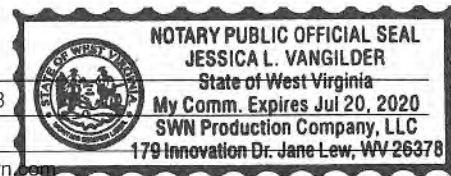
Certification of Notice is hereby given:

THEREFORE, I Brittany Woody, 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: SWN Production Co., LLC
By: Brittany Woody
Its: Regulatory Analyst
Telephone: 304-884-1610

Brittany Woody

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-884-1690
Email: Brittany_Woody@swn.com



Subscribed and sworn before me this 23rd day of October, 2018.
Jessica L. Vangilder Notary Public
My Commission Expires Jul 20, 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 deprivacyofficer@wv.gov.

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

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

Date of Notice: 11/6/18 Date Permit Application Filed: 11/6/18

Notice of:

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

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

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

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

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

SURFACE OWNER(s)
 Name: Joseph L. Yocum
 Address: 230 Curtis Ave
 Moundsville, WV 26041
 Name: Michael D. Yocum
 Address: 2001 4th Street
 Moundsville, WV 26041

COAL OWNER OR LESSEE
 Name: Blaze Minerals, LLC
 Address: 520 Folly Road, Suite P285
 Charleston, SC 29412

COAL OPERATOR
 Name: _____
 Address: _____

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

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: See Attachment 13
 Address: _____

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: Columbia Gas Transmission, LLC Attn: John Shelton
 Address: 1700 MacCorkle Ave SE PO Box 1273
 Charleston, WV 25325

*Please attach additional forms if necessary

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

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

Date of Notice: 11/6/18 **Date Permit Application Filed:** 11/6/18
Notice of:

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

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

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

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

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

SURFACE OWNER(s)
 Name: Loretta J. Francis
 Address: 118 Poplar Ave
Moundsville, WV 26041
 Name: Phillip D. High
 Address: 37 Aaronwoods Court
Wheeling, WV 26003

COAL OWNER OR LESSEE
 Name: Consol Energy Inc.
 Address: 1000 Consol Energy Drive
Canonsburg, PA 15317-6506

COAL OPERATOR
 Name: _____
 Address: _____

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

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

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

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

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*Please attach additional forms if necessary

Attachment 13.

OWNERNAME	ADDRESS	CITY/STATE/ZIP	PARCEL_ID	WaterSources
GEDEON DANIEL D ET UX	6740 PARK RD	LEAVITTSBURG, OH 44430	07 26000600000000	3
VELLEKOOP PETER ET UX	220 CRYSTAL COVE RD	WALDOBORO, ME 04572	07 26000600020000	1
YOCUM MICHAEL DAVID ET AL	2001 4TH ST	MOUNDSVILLE, WV 26041	07 27000400010000	1
HIGH PHILIP D	37 AARON WOODS CT	WHEELING, WV 26003	07 27000800000000	1

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API NO. 47- 069 -
OPERATOR WELL NO. Yocum MSH Pad
Well Pad Name: Yocum MSH Pad

01/11/2019

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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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Office of Oil and Gas
NOV 7 2018
WV Dept.
Environmental Protection

WW-6A
(8-13)

API NO. 47-069 -
OPERATOR WELL NO. Yocum/MSH 17 **01/11/2019**
Well Pad Name: Yocum MSH Pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

*Brittany
Woody*

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-884-1690

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 23rd day of Oct. 2018.
Jessica L. Vangilder Notary Public
My Commission Expires Jul 20, 2020

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Office of Oil and Gas

NOV 7 2018

WV Department of
Environmental Protection

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

01/11/2019



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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Office of Oil and Gas
NOV 7 2018
WV Department of
Environmental Protection

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LPL ✖ LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: YOCUM MSH	WELL # 1H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY - CODE MARSHALL - 051	DISTRICT; LIBERTY	
SURFACE OWNER: JOSEPH LEE & MICHAEL D. YOCUM	USGS 7 1/2 QUADRANGLE MAP NAME LITTLETON, WV		

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

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

Date of Notice: 12/21/2017 Date of Planned Entry: 12/28/2017

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Joseph L. Yocum
Address: 230 Curtis Ave
Moundsville, WV 26041
Name: Michael D. Yocum
Address: 2001 4th Street
Moundsville, WV 26041
Name: Loretta J. Francis
Address: 118 Poplar Ave
Moundsville, WV 26041

COAL OWNER OR LESSEE

Name: Blaze Minerals, LLC
Address: 520 Folly Road, Suite P285
Charleston, SC 29412

MINERAL OWNER(s)

Name: Columbia Gas Transmission, LLC
Address: 5151 San Felipe, Suite 2500
Houston, TX 77005

*please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
NOV 7 2018
WV Department of
Environmental Protection

Notice is hereby given:

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

State: West Virginia
County: Marshall
District: Liberty
Quadrangle: Littleton
Approx. Latitude & Longitude: 39.732795, -80.583668
Public Road Access: Amos Hollow Road
Watershed: West Virginia Fork Fish Creek
Generally used farm name: Yocum

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC
Telephone: 304-884-1610
Email: dee_southall@swn.com or brittany_woody@swn.com
Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 12/21/2017 **Date of Planned Entry:** 12/28/2017

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

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Notice is hereby provided to:

SURFACE OWNER(s)

Name: Philip D. High

Address: 37 Aaronwoods Court
Wheeling, WV 26003

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: CONSOL Energy Inc.

Address: 1000 Consol Energy Drive
Canonsburg, PA 15317-6506

MINERAL OWNER(s)

Name: DWG Oil and Gas Acquisitions, LLC

Address: 356 Nicholson Loop Road
Morgantown, WV 26508

*please attach additional forms if necessary

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Office of Oil and Gas
NOV 7 2018
WV Department of
Environmental Protection

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.732795, -80.583668</u>
County: <u>Marshall</u>	Public Road Access: <u>Amos Hollow Road</u>
District: <u>Liberty</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Yocum</u>

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

Notice is hereby given by:

Well Operator: <u>SWN PRODUCTION COMPANY, LLC</u>	Address: <u>PO BOX 1300</u>
Telephone: <u>304-884-1610</u>	<u>JANE LEW, WV 26378</u>
Email: <u>dee_southall@swn.com or brittany_woody@swn.com</u>	Facsimile: <u>304-884-1690</u>

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

MINERAL OWNER(s)

Name: Thomas Elwood Franklin
Address: 11504 Clocktower Lane
Laurel, MD 20708

*please attach additional forms if necessary

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Office of Oil and Gas
NOV 7 2018

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District: Liberty
Quadrangle: Littleton

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Public Road Access: Amos Hollow Road
Watershed: West Virginia Fork Fish Creek
Generally used farm name: Yocum

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

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

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

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Notice is hereby provided to:

<input type="checkbox"/> SURFACE OWNER(s) Name: _____ Address: _____ _____ Name: _____ Address: _____ _____ Name: _____ Address: _____ _____	<input type="checkbox"/> COAL OWNER OR LESSEE Name: _____ Address: _____ _____ <input checked="" type="checkbox"/> MINERAL OWNER(s) Name: <u>Joseph Lee Yocum and Michael D. Yocum</u> Address: <u>230 Curtis Avenue</u> <u>Moundsville, WV 26041</u> *please attach additional forms if necessary
---	--

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Office of Oil and Gas

NOV 7 2018

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Telephone: <u>304-884-1610</u>	<u>JANE LEW, WV 26378</u>	
Email: <u>dee_southall@swn.com or brittany_woody@swn.com</u>	Facsimile: <u>304-884-1690</u>	

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 12/21/2017 **Date of Planned Entry:** 12/28/2017

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)
Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: _____
Address: _____

MINERAL OWNER(s)
Name: Karen Sue Franklin Marshall
Address: 11504 Clocktower Lane
Laurel, MD 20708
*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Marshall
District: Liberty
Quadrangle: Littleton

Approx. Latitude & Longitude: 39.732795, -80.583668
Public Road Access: Amos Hollow Road
Watershed: West Virginia Fork Fish Creek
Generally used farm name: Yocum

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC
Telephone: 304-884-1610
Email: dee_southall@swn.com or brittany_woody@swn.com

Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: 304-884-1690

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WV Department of
Environmental Protection

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

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/11/18

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

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

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

Name: Philip D. High
Address: 37 Aaronwoods Court
Wheeling, WV 26003

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

Authorized Representative: Justin Booth
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

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WV Department of
Environmental Protection

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

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/19/18

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

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

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

Name: Michael D. Yocum
Address: 2001 4th Street
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

Authorized Representative: Justin Booth
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

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

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/16/18

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

HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

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

Name: Joseph L. Yocum
Address: 230 Curtis Ave.
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

Authorized Representative: Justin Booth
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

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

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/11/18

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: Loretta J. Francis
Address: 118 Poplar Ave.
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

Authorized Representative: Justin Booth
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-997-9816
Email: Justin_Booth@swn.com
Facsimile: 304-884-1691

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WV Department of
Environmental Protection

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/11/18

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Phillip D. High
Address: 37 Aaronwoods Court
Wheeling, WV 26003

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-997-9816
Email: Justin_Booth@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Facsimile: 304-884-1691

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/11/18

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Michael D. Yocum
Address: 2001 4th Street
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>535,684.289</u>
County: <u>Marshall</u>	Northing: <u>4,398,196.511</u>
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Rd.</u>
Quadrangle: <u>Littleton, WV</u>	Generally used farm name: <u>Yocum MSH</u>
Watershed: <u>Fish Creek</u>	

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-997-9818
Email: Justin_Booth@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Facsimile: 304-884-1691

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/11/18

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Loretta J. Francis
Address: 118 Poplar Ave.
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,684.289</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,196.511</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>Fish Creek</u>			

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-997-9816
Email: Justin_Booth@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Facsimile: 304-884-1691

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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WV Department of
Environmental Protection

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

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

Date of Notice: 10/19/2018 **Date Permit Application Filed:** 11/6/18

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> CERTIFIED MAIL
RETURN RECEIPT REQUESTED | <input type="checkbox"/> HAND
DELIVERY |
|--|---|

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Joseph L. Yocum
Address: 230 Curtis Ave.
Moundsville, WV 26041

Name: _____
Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>535,684.289</u>
County: <u>Marshall</u>		Northing: <u>4,398,196.511</u>
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Rd.</u>	
Quadrangle: <u>Littleton, WV</u>	Generally used farm name: <u>Yocum MSH</u>	
Watershed: <u>Fish Creek</u>		

This Notice Shall Include:

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

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Jane Lew, WV 26378
Facsimile: 304-884-1691

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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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Environmental Protection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

October 22, 2018

Jill M. Newman
Deputy Commissioner

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

Subject: DOH Permit for the Yocum Pad, Marshall County
Yocum MSH 1H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2018-0157 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Marshall County Route 89 SLS.

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

Very Truly Yours,

A handwritten signature in blue ink that reads "Gary K. Clayton".

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

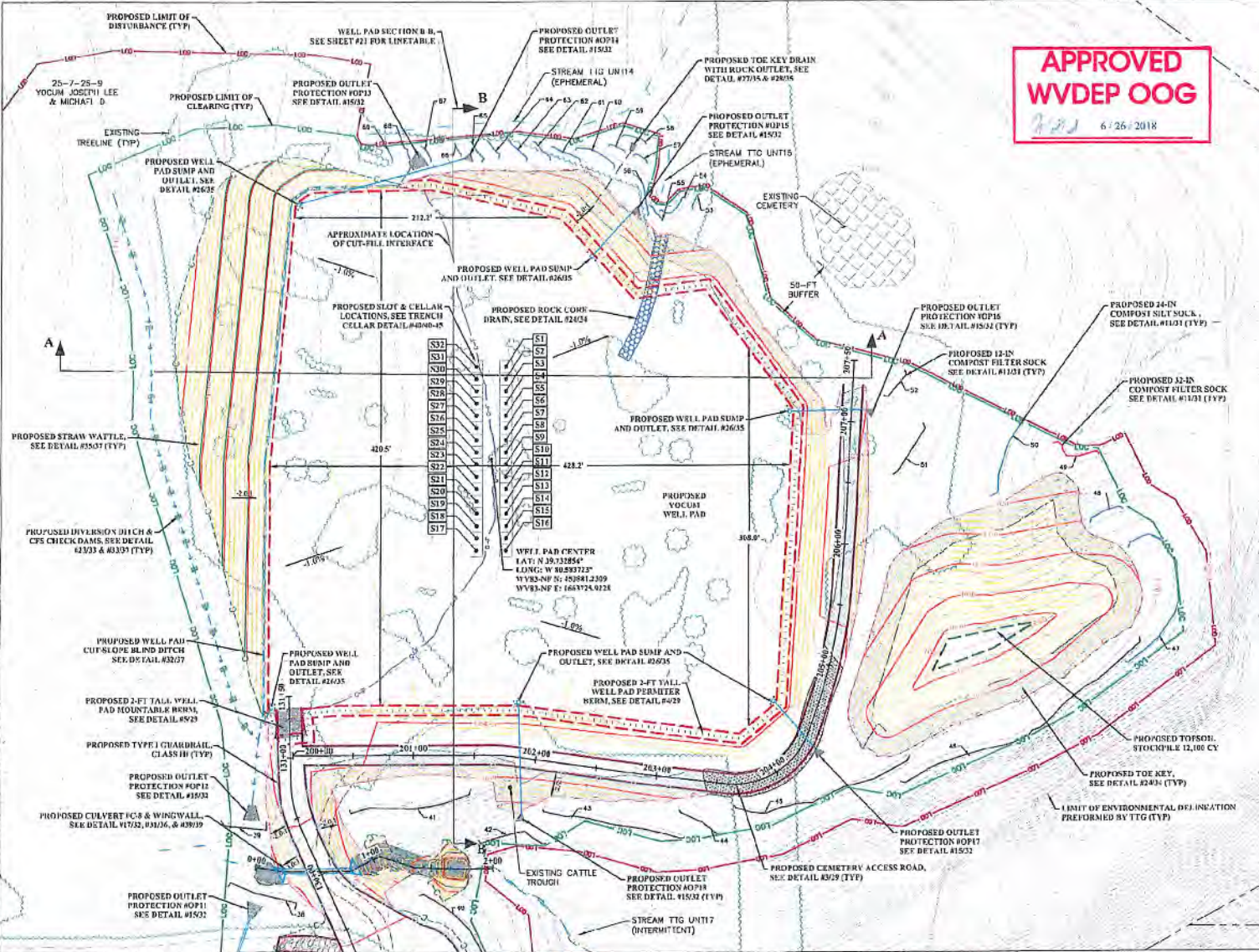
Cc: Brittany Woody
Southwestern Energy
CH, OM, D-6
File

		Frac Additives		Rev 6/21/2018
Product Name	Product Use	Chemical Name	CAS Number	
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1	
		Acetic Acid	64-19-7	
		Peroxyacetic Acid	79-21-0	
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	01/14/2019	
		Nonylphenol Ethoxylate	Proprietary	
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8	
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1	
		Ethanol	64-17-5	
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1	
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1	
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary	
		Ethylene Glycol	107-21-1	
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8	
		Propenoic acid, polymer with propenamide	9003-06 9	
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21 1	
		Cinnamaldehyde	104-55 2	
		Butyl cellosolve	111-76 2	
		Formic acid	64-18 6	
		Polyether	Proprietary	
		Acetophenone, thiourea, formaldehyde polymer	68527-49 1	
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0	
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8	
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1	
		Oxyalkylated fatty acid	68951-67-7	
		Fatty acids	61790-12-3	
		Modified thiourea polymer	68527-49-1	
		Water	7732-18-5	
		Hydrochloric acid	7647-01-0	
		Potassium acetate	127-08-2	
		Formaldehyde	50-00-0	
Ecopol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7	
		Citric Acid	77-92-9	
		Water	7732-18-5	
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0	
		Water	7732-18-5	
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary	
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8	
		Ethylene Glycol	107-21-1	
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1	
		Fatty Alcohols ethoxylated	Proprietary	
		Water	7732-18-5	
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	
		Inorganic Salt	Proprietary	
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A	
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary	
		Hydrotreated light petroleum distillate	64742-47-8	
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary	
		Ammonium Chloride	12125-02-9	
CarboNRT	Tracer	Ceramic Proppant	66402-68-4	

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APPROVED WVDEP OOG
 6/26/2018

PLAN LEGEND	
(Symbol)	PROPERTY LINES
(Symbol)	EXISTING CONTOURS
(Symbol)	DELINEATED STREAM - PERMANENT
(Symbol)	DELINEATED STREAM - INTERMITTENT
(Symbol)	DELINEATED WELAND - FALLS FROM EMBANKMENT
(Symbol)	DELINEATED WELAND - FALLS FROM FORECAST GFD
(Symbol)	PROPOSED CURB/RT
(Symbol)	-1.0% LIMIT OF CLEARING
(Symbol)	LIMIT OF DISTURBANCE
(Symbol)	PROPOSED CONTOURS
(Symbol)	-C- PROPOSED CUT LIMIT
(Symbol)	PROPOSED FILL LIMIT
(Symbol)	APPROXIMATE CUT-FILL IN SURFACE - ZERO CUT LINE
(Symbol)	PROPOSED EDGE OF WELL PAD
(Symbol)	PROPOSED EDGE OF ACCESS ROAD
(Symbol)	LIMIT OF ENVIRONMENTAL DELINEATIONS
(Symbol)	PROPOSED SOIL TOX KEY SEE DETAILS
(Symbol)	PROPOSED WELL PAD BERM
(Symbol)	PROPOSED EDGE OF TOPSOIL STOCKPILE
(Symbol)	PROPOSED 12-IN COMPOST FILTER SOCK (CFS)
(Symbol)	PROPOSED 24-IN COMPOST FILTER SOCK (CFS)
(Symbol)	PROPOSED 32-IN COMPOST FILTER SOCK (CFS)
(Symbol)	PROPOSED VEGETATED DITCH
(Symbol)	PROPOSED DETAIL PROTECTION
(Symbol)	PROPOSED ROAD WIDENING

- NOTES**
- EXISTING FEATURES AND CONTOURS ARE BASED ON AN AERIAL MAPPING PROVIDED BY BLUE MOUNTAIN, INC. IN FEBRUARY 2017. MAPPING WAS OBTAINED FROM ORTHOPHOTOGRAPHIC PHOTOGRAPHY TAKEN ON 26 MARCH 2016.
 - ENVIRONMENTAL DELINEATIONS WERE PERFORMED BY THASHER IN MARCH 2017.
 - PROPERTY LINES SHOWN ARE BASED ON A COMBINATION OF THE D SURVEY AND GIS TAX MAPS.
 - TOE KEYS AND TOE BRICHES SHOWN ARE FOR REPRESENTATION ONLY. TOE KEYS AND TOE BRICHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL #2924 AND #2925.
 - ALL PROPOSED CUT AND STRUCTURAL HILL SLOPES ARE AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS:
 - WELL PAD CUT - 2H:1V
 - WELL PAD FILL - 2H:1V
 - ACCESS ROAD CUT - 3H:1V
 - ACCESS ROAD FILL - 3H:1V
 - TOPSOIL STOCKPILE HILL - 2.5H:1V
 - ASSIGNED 16-H TOPSOIL SHEETS.
 - ALL PROPOSED SLOPES ARE TO BE TRACKED IN ACCORDANCE WITH DETAIL #1102.
 - SEE COMPOST FILTER SOCK SCHEDULE ON DETAIL #1101 FOR SECTIONS THAT MAY BE REPLACED WITH SILT SAVER PRIORITY 1 (DETAIL #920) OR SUPER SILT FENCE (DETAIL #1291).
 - PROPOSED CONTOURS SHOWN INSIDE THE WELL PAD BERMS REPRESENT THE SUBGRADE SURFACE. THE STONE SURFACE SHALL BE GRADED IN ACCORDANCE WITH THE DETAILS AND TYPICAL SECTIONS SHOWN WITHIN THESE PLANS. PROPOSED CONTOURS IN ALL OTHER LOCATIONS REPRESENT FINISH GRADE.
 - ALL CONSTRUCTED SLOPES SHALL BE ESTABLISHED WITH HYDRAULICALLY APPLIED EROSION CONTROL BLANKET OR ROLLED EROSION CONTROL SLOPE MATTING SEE DETAIL #2930 AND #2933.
 - ALL SURVEY STAKES SHALL FOLLOW SWN FLAGGING/STAKING STANDARDS. SEE DETAIL #3014.
 - SEE SHEET 24 FOR PAD CORNER LAYOUT POINTS & INFORMATION.



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REV	DATE	DESCRIPTION



APPROVED FOR PERMITS	DATE: 02/19/2018
APPROVED FOR USE	DATE: 05/18/2018
APPROVED FOR CONSTRUCTION	DATE:
PROJECT NO:	1010-030-3170

THRASHER
 THE THRASHER GROUP, INC.
 6100 WHITE HAVEN BOULEVARD, SPRINGFIELD, WV 26330
 PHONE (304) 624-4100 FAX (304) 624-7631

PROJECT OWNER	SWN PRODUCTION COMPANY, LLC
PROJECT NAME	YOCUM WELL PAD
PROJECT LOCATION	MARSHALL COUNTY, WV