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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Monday, August 20, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for SWN A WTZ 5H  
47-103-03233-00-00

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the printed name and title.

Operator's Well Number: SWN A WTZ 5H  
Farm Name: SWN PRODUCTION COMPAN  
U.S. WELL NUMBER: 47-103-03233-00-00  
Horizontal 6A New Drill  
Date Issued: 8/20/2018

# 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

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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.

API Number: 47103 03233

## 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](mailto:DEPOOGNotify@wv.gov).

WW-6B  
(04/15)

API NO. 47- 103 -  
OPERATOR WELL NO. SWN A WTZ 5H  
Well Pad Name: SWN A WTZ Pad

**47 103 032 33 DMH**

4/18/18

**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 103- Wetzel 12-Proctor 681-Wileyville  
Operator ID County District Quadrangle

2) Operator's Well Number: SWN A WTZ 5H Well Pad Name: SWN A WTZ Pad

3) Farm Name/Surface Owner: SWN Production Company, LLC Public Road Access: Macedonia Ridge

4) Elevation, current ground: 1337' Elevation, proposed post-construction: 1342'

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow  Deep \_\_\_\_\_

Horizontal  \_\_\_\_\_

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus Up-Dip Well to the North LP, Target Top TVD- 7359', Target Base TVD- 7397', Anticipated Thickness- 38', Associated Pressure- 4808

8) Proposed Total Vertical Depth: 7381' at the heel (LP deepest TVD)

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21,117'

11) Proposed Horizontal Leg Length: 13330.06'

12) Approximate Fresh Water Strata Depths: 300'

13) Method to Determine Fresh Water Depths: The base of fresh water at the alternate minimum depth of 300'.

14) Approximate Saltwater Depths: 1364' Logs will be run for a Salinity profile analysis

15) Approximate Coal Seam Depths: 1229'

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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APR 20 2018

47 103 03233

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#	400'	400' ✓	392 sx/CTS
Coal							
Intermediate	9 5/8"	New	J-55	36#	2774'	2774' ✓	1080 sx/CTS
Production	5 1/2"	New	HCP-110	20#	21117'	21117'	see 101 and 201 101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000
Tubing							
Liners							

DMAH 4/18/18

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	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/50% 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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WW-6B  
(10/14)

API NO. 47- 103 - \_\_\_\_\_

OPERATOR WELL NO. SWN A WTZ 5H

Well Pad Name: SWN A WTZ Pad

47 103 03233

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

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.)

DMH  
4-12-18

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): 15.05

22) Area to be disturbed for well pad only, less access road (acres): 6.67

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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25) Proposed borehole conditioning procedures:

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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.

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\*Note: Attach additional sheets as needed.

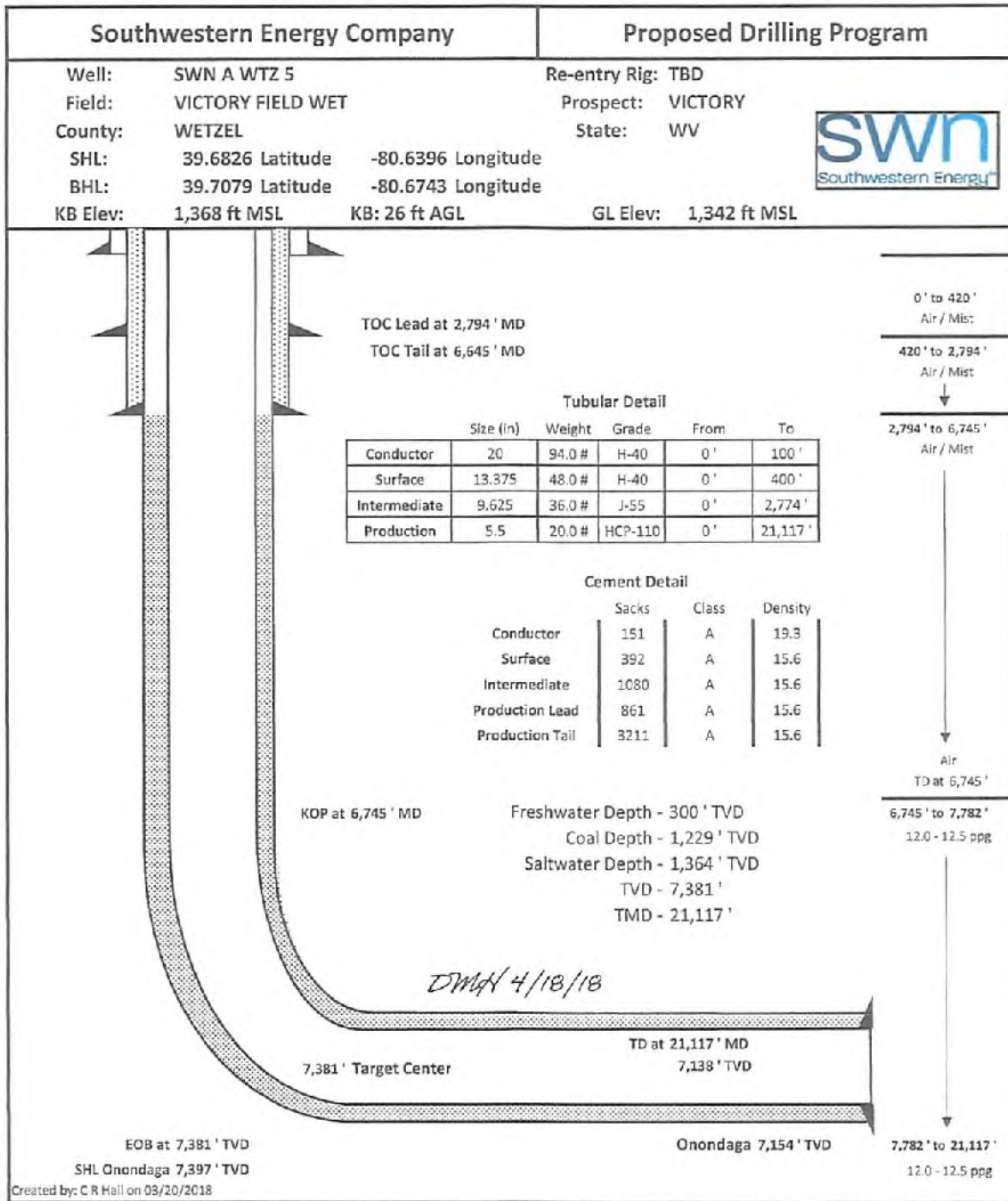
SWN A WTZ 5H AOR

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
Unknown	Unknown		39.683414	80.640257			
103-01485	Perkins Oil & Gas, Inc	Active	39.682609	80.640643			
103-01715	Horner Oil And Gas Production, Inc.	Active	39.681283	80.636491	3397'	Gordon	Big Injun, Big Lime
103-00401	Columbia Gas Transmission, LLC	Active	39.698835	80.662533	2141'	Maxton	Big Dunkard
103-00132	Columbia Gas Transmission, LLC	Active	39.704796	80.671252	1805'	Maxton	Slate Sand, Lime, Red Rock

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## Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Surface Intermediate	S001	accelerator	calcium chloride	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
			polypropylene glycol	25322-69-4
	D046	antifoam	fullers earth (attapulgate)	8031-18-3
			crystalline silica	14808-60-7
	D201	retarder	metal oxide	proprietary
	D202	dispersant	sulphonated synthetic polymer	proprietary
Production-Tail			formaldehyde (impurity)	proprietary
	D046	antifoam	polypropylene glycol	25322-69-4
	D167	fluid loss	fullers earth (attapulgate)	8031-18-3
			aliphatic amide polymer	proprietary
	D065	dispersant	sodium polynaphthalene sulfonate	9008-63-3
			sodium sulfate	7757-82-6
	D201	retarder	crystalline silica	14808-60-7
D153	anti-settling	metal oxide	proprietary	
		crystalline silica	14808-60-7	

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WW-9  
(2/15)

API Number 47 - 103 - \_\_\_\_\_  
Operator's Well No. SWN AWTZ 5H \_\_\_\_\_

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 494512824  
Watershed (HUC 10) Upper Ohio South Quadrangle Wileyville

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, 34-119-23776, 34-167-25862, 34-155-23795, 34-121-23955, 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 )

*DMH  
4-12-18*

Will closed loop system be used? If so, describe: Yes

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

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste to be sent to 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.

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I certify that I understand and agree to the terms and conditions of the GENERAL WATER DIVERSION 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 of any 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 [Signature]  
Company Official (Typed Name) Dee Southall  
Company Official Title Senior Regulatory Analyst



Subscribed and sworn before me this 13th day of March, 20 18

Brittany R. Woody Notary Public

My commission expires 11/27/22

47 103 03 233

Form WW-9

Operator's Well No. SWN A WTZ 5H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 15.05 Prevegetation pH \_\_\_\_\_

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 6.67

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

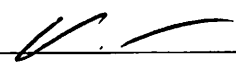
Mulch Hay/Straw 2.5 Tons/acre

**Seed Mixtures**

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
<b>Attachment 3B</b>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: Oil and Gas Inspector

Date: 4-12-18

Field Reviewed?  Yes  No

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**Attachment 3A**  
**Drilling Mediums**

Synthetic Oil

Brine

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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47103 0322



# WVD Seeding Specification

Attachment

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*R<sup>+</sup>  
A → V<sup>+</sup>*

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%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%

All legumes are inoculated at 5x normal rate

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

# MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

RECEIVED  
Office of Oil and Gas  
APR 30 2018  
WV Department of  
Environmental Protection

**API NO. 47-XXX-XXXXX**  
**WELL NAME: SWN A WTZ 5H**  
**Wileyville QUAD**  
**Proctor DISTRICT**  
**Wetzel COUNTY, WEST VIRGINIA**

Submitted by:

Dee Southall

Senior Regulatory

Title: Analyst

Date: 3/8/2018

SWN Production Co., LLC

Approved by:

Date: 4-12-18

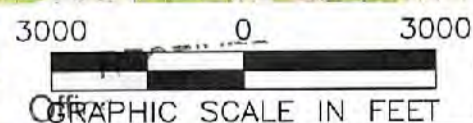
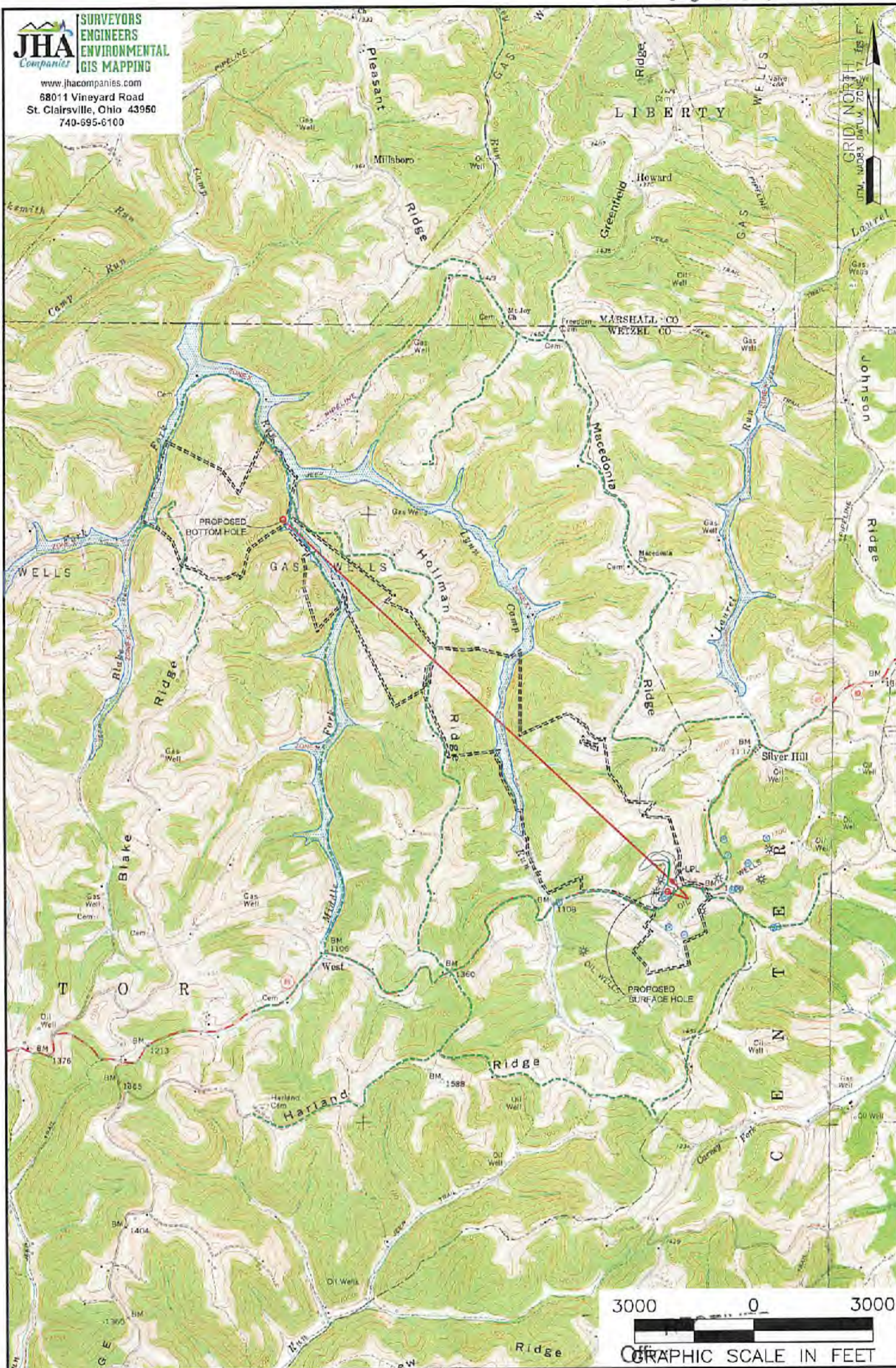
Title: Oil & Gas Inspector

Approved by:

Date:

Title:

**JHA**  
Companies  
**SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
GIS MAPPING**  
www.jhacompanies.com  
68011 Vineyard Road  
St. Clairsville, Ohio 43950  
740-695-6100



**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.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

**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
- WV DEPARTMENT OF ENVIRONMENTAL PROTECTION

**WELL OPERATOR:**  
SWN PRODUCTION COMPANY, LLC  
**ADDRESS:**  
P.O. BOX 1300 JANE LEW, WV 26378  
**SURFACE OWNER:**  
SWN PRODUCTION COMPANY, LLC

<b>WELL (FARM) NAME:</b> SWN A WTZ	<b>WELL #</b> 5H	<b>SERIAL #</b> XXXX
<b>COUNTY - CODE</b> WETZEL - 103	<b>DISTRICT;</b> PROCTOR	
<b>USGS 7 1/2 QUADRANGLE MAP NAME</b> WILEYVILLE, WV		

(2,000' SCALE) LATITUDE: 39°45'00" BOTTOM HOLE | 2151'

(2,000' SCALE) LATITUDE: 39°42'30" SURFACE HOLE | 4105'



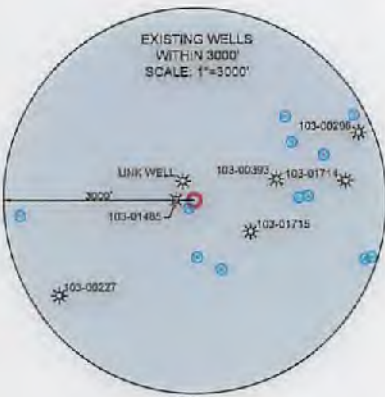
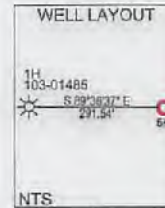
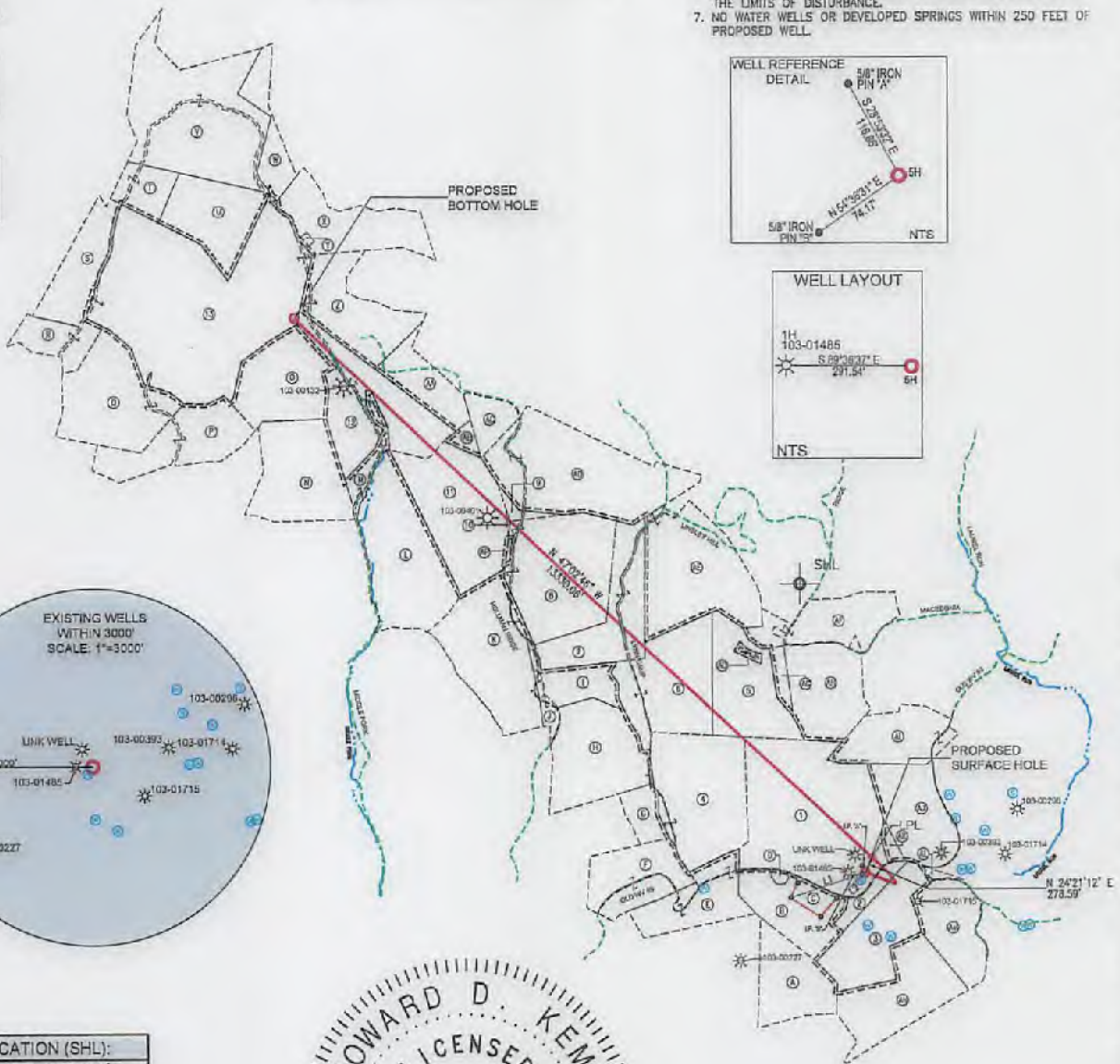
www.jhacompanies.com  
68011 Vineyard Road  
St. Clairsville, Ohio 43960  
740-695-6100

LINE	BEARING	DISTANCE
L1	N 71°46'08" E	1337.04'
L2	N 48°33'26" E	663.16'

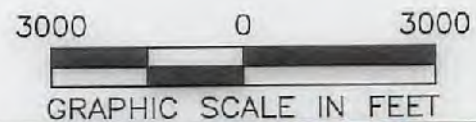
NOTES ON SURVEY

- COORDINATE 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/OR FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- 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 THE LIMITS OF DISTURBANCE.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US FT



<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4392593.48 EASTING: 530904.97
<b>LANDING POINT (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4392671.39 EASTING: 530938.68
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4395389.01 EASTING: 527920.12



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.

P.S. 2041



	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	COMPANY: <b>SWN</b> Production Company, LLC	SWN A
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF ELEVATION: GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: WTZ 5H	
WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>		API WELL #: 47 STATE 103 COUNTY PERMIT 03233		
WATERSHED: UPPER OHIO SOUTH		ELEVATION: 1,342.0'		
DISTRICT: PROCTOR COUNTY: WETZEL		QUADRANGLE: WILEYVILLE, WV		
SURFACE OWNER: SWN PRODUCTION COMPANY, LLC		ACREAGE: ±128.24		
OIL & GAS ROYALTY OWNER: RODNEY CALVERT, ET AL		ACREAGE: ±128.24		
DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/>		ESTIMATED DEPTH: 7,381' TVD 21,117' TMD		
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY)				
TARGET FORMATION: MARCELLUS				
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC		DESIGNATED AGENT: DEE SOUTHALL		
ADDRESS: P.O. BOX 1300		ADDRESS: P.O. BOX 1300		
CITY: JANE LEW STATE: WV ZIP CODE: 26378		CITY: JANE LEW STATE: WV ZIP CODE: 26378		
LEGEND: ● PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊙ EXISTING SPRING		REVISIONS:		DATE: 03-20-2018
— SURVEYED BOUNDARY - - - DRILLING UNIT ===== LEASE BOUNDARY - - - PROPOSED PATH				DRAWN BY: D. REED SCALE: 1" = 3000' DRAWING NO: 2016-519 WELL LOCATION PLAT

(2,000' SCALE) LONGITUDE: -80°37'30" SURFACE HOLE | 9361'  
(2,000' SCALE) LONGITUDE: -80°40'00" BOTTOM HOLE | 15319'



WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	SWN PRODUCTION COMPANY, LLC (S) RODNEY CALVERT, ET AL (R)	12-10-29
TRACT	SURFACE OWNER	TAX PARCEL
2	RODNEY A. CALVERT	12-10-29.5
3	GARY C. YOCUM & LAVERNE F. YOCUM (LIFE ESTATE); CHRIS B. YOCUM (REMAINDERMAN)	12-15-9
4	SWN PRODUCTION COMPANY, LLC	12-10-28
5	DARREN YOHO; KEVIN YOHO; BRADLEY YOHO; JEFFREY YOHO; DEBORAH YOHO	12-10-15
6	SWN PRODUCTION COMPANY, LLC	12-10-15
7	SWN PRODUCTION COMPANY, LLC	12-10-10
8	ROBERT A. STOUT & SHERI L. STOUT, HUSBAND AND WIFE, AND UNTO SURVIVOR OF THEM	12-10-9
9	MILLTREE PROPERTIES, LLC	12-10-2
10	MILLTREE PROPERTIES, LLC	12-10-1.1
11	ANDREW D. SHULUGA & ANDREA M. SHULUGA, HUSBAND AND WIFE, AND UNTO SURVIVOR OF THEM	12-10-1
12	MARK MASSARI	12-4-38
13	CHRISTOPHER P. BITHELL	12-4-26

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	JOSEPH C. DREYER	12-15-8
B	RODNEY A. CALVERT	12-10-29.3
C	RODNEY A. CALVERT	12-10-29.4
D	RODNEY CALVERT & ET AL	12-10-29.1
E	HAESSLY LAND & TIMBER, LLC, AN OHIO LIMITED LIABILITY COMPANY	12-10-33
F	HAESSLY LAND & TIMBER, LLC	12-10-32
G	SWN PRODUCTION COMPANY, LLC	12-10-27
H	ROBERT C. RITCHEA & JAMES L. RITCHEA	12-10-22
I	SWN PRODUCTION COMPANY, LLC	12-10-14
J	COURTNEY E. RICHMOND & RHEA K. RICHMOND, HIS WIFE	12-10-21
K	COURTNEY E. RICHMOND & RHEA K. RICHMOND, HIS WIFE	12-10-13
L	ANDREW D. SHULUGA & ANDREA M. SHULUGA, CO-TRUSTEES OF THE ANDREW D. SHULUGA AND ANDREA M. SHULUGA REVOCABLE TRUST	12-9-15
M	ANDREW D. SHULUGA & ANDREA M. SHULUGA, CO-TRUSTEES OF THE ANDREW D. SHULUGA AND ANDREA M. SHULUGA REVOCABLE TRUST	12-9-9
N	ANDREW D. SHULUGA & ANDREA M. SHULUGA, CO-TRUSTEES OF THE ANDREW D. SHULUGA AND ANDREA M. SHULUGA REVOCABLE TRUST	12-9-8
O	CHRISTOPHER P. BITHELL	12-4-37
P	WILLIAM WAGNER & BARBARA WAGNER (LIFE ESTATE); ROBERTA BROOKS AND HEATHER BRINK (REMAINDERMAN)	12-4-36
Q	CHRISTOPHER P. BITHELL	12-4-35
R	JOHN H. MORGAN & SUE M. MORGAN, TRUSTEES, U/T/A DATED JUNE 10, 1992 F/B/O THE MORGAN FAMILY	12-4-34
S	SHIBEN ESTATES	12-4-25
T	NANCY RABER & ET AL	12-4-15
U	CHRISTOPHER P. BITHELL	12-4-17
V	NANCY RABER & ET AL	12-4-6
W	NANCY RABER & ET AL	12-4-7
X	JOHN STULGA	12-4-19
Y	SCHOOL LOT	12-4-18
Z	CLAUDIA MECKEL-JONAS; ROBERT MECKEL; AND ASTRID MECKEL-HAUPT, AS JOINT TENANTS WITH RIGHT OF SURVIVORSHIP	12-4-27
AA	JAMES L. RITCHEA & HAZEL JORETTA RITCHEA	12-4-39
AB	RICHARD W. MASTNEY & MARK MASSARI	12-5-29
AC	RICHARD W. MASTNEY & MARK MASSARI	12-5-20
AD	ROBERT A. STOUT & SHERI L. STOUT, HUSBAND AND WIFE, AND UNTO SURVIVOR OF THEM	12-10-3
AE	SWN PRODUCTION COMPANY, LLC	12-10-11
AF	BRADLEY SCOTT YOHO	12-10-19
AG	DARREN YOHO; KEVIN YOHO; BRADLEY YOHO; JEFFREY YOHO; DEBORAH YOHO	12-10-17
AH	DARREN YOHO; KEVIN YOHO; BRADLEY YOHO; JEFFREY YOHO; DEBORAH YOHO	12-10-18
AI	CORY & DAVID DURIG	01-7-2
AJ	NORMA F. YOHO	01-7-40
AK	JACOB BICKERSTAFF & ANNA BICKERSTAFF, HUSBAND AND WIFE	12-10-29.2
AL	ERIC L. YEATER & AMANDA J. YEATER, HUSBAND AND WIFE	12-10-34
AM	HAESSLY LAND & TIMBER, LLC, AN OHIO LIMITED LIABILITY COMPANY	12-15-11
AN	HAESSLY LAND & TIMBER, LLC, AN OHIO LIMITED LIABILITY COMPANY	12-15-10
AO	JEFFREY J. YOHO	12-10-16.1
AP	ANDREW D. SHULUGA & ANDREA M. SHULUGA, CO-TRUSTEES OF THE ANDREW D. SHULUGA AND ANDREA M. SHULUGA REVOCABLE TRUST	12-10-9.1

REVISIONS:	COMPANY:	 	
	OPERATOR'S	SWN A	DATE: 03-20-2018
	WELL #:	WTZ 5H	DRAWN BY: D. REED
	DISTRICT:	PROCTOR	SCALE: N/A
	COUNTY:	WETZEL	DRAWING NO: 2018-519
	STATE:	WV	WELL LOCATION PLAT

4710303233

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

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

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

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

**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 Office of Oil and Gas, including but not limited to the following:

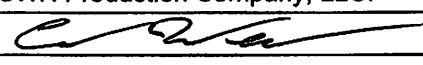
- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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

Well Operator: SWN Production Company, LLC.  
By:   
Its: Caleb Weaver - Senior Landman

47 103 03233

**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  
SWN A WTZ 5H

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APR 30 2018  
WV Department of  
Environmental Protection

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG
1	12-10-29	Isaac L. Carney and Mary Carney, his wife (Ruth Ann Calvert; Cathy Williams; Carla E. rabel; Vicki Forrester; Nancy G. Metheny; Connie Jean Calvert Rowland; Ammon A. Burley; First Assembly of God Church; Krystal K. Camp; Timothy N. Burley; Michael A. Fish; Jeffrey L. Fish; Franklin Thomas Barrett; Sharon Zeppernick; Annette Aldine Lloyd)	Hope Natural Gas Company	12.50%	18A/25
		Hope Natural Gas Company	G. F. Eagan and John Robinson, a partnership, trading and doing business as Eagan and Robinson		39A/249
		Geo. F. Eagan	Blanche Eagon		14/268
		John H. Robinson	Elva Robinson and Mary Ellen Davis		15/455
		John H. Robinson, Blanche Eagon, as Executrix of the Estate of George F. Eagon, deceased, Blanche Eagon, in her own right, Mildred M. Lartigue, and Carl L. Eagon (sometimes called "Principals"), by Paul J. Shiben and Joseph V. DeMarco, Jr., their Attorneys in Fact, and Elva Robinson, Executrix of the Estate of the said John H. Robinson, now deceased, Elva Robinson and Mary Ellen Davis	Elva Robinson and Mary Ellen Davis		43A/440
		Elva Robinson and Mary Ellen Davis	Andrew L. Henry, Charles E. Reed, and Harry R. Cronin, Jr.		44A/92
		Katherine A. Henry and Harry R. Cronin, Jr.	Charles E. Reed and Kathryn C. Reed, husband and wife		51A/241
		Kathryn C. Reed, a widow and unmarried	Carl Perkins		55A/54

47 103 03233

**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

SWN A WTZ 5H

Carl D. Perkins and Dorothy Louise Perkins, his wife  
 Wetzel Co Perkins Oil and Gas, Inc., a West Virginia Corporation

Perkins Oil & Gas Inc., a West Virginia corporation  
 Stone Energy Corporation, a Delaware corporation

Stone Energy Corporation  
 Chesapeake Appalachia, LLC,, and Statoil USA Onshore Properties, Inc.

Chesapeake Appalachia, L.L.C., SWN Production Company, LLC 167A/9

2 12-10-29.5 Isaac L. Carney and Mary Carney, his wife  
 (Rodney Calvert; Cathy Williams; Carla E. Rabel; Vicki Forrester; Nancy G. Metheny; Connie Jean Calvert Rowland)  
 Hope Natural Gas Company

Hope Natural Gas Company 12.50% 18A/25  
 G. F. Eagan and John Robinson, a partnership, trading and doing business as Eagan and Robinson 39A/249

Geo. F. Eagan Blanche Eagon 14/268  
 John H. Robinson Elva Robinson and Mary Ellen Davis 15/455

John H. Robinson, Blanche Eagon, as Executrix of the Estate of George F. Eagon, deceased, Blanche Eagon, in her own right, Mildred M. Lartigue, and Carl L. Eagon (sometimes called "Principals"), by Paul J. Shibben and Joseph V. DeMarco, Jr., their Attorneys in Fact, and Elva Robinson, Executrix of the Estate of the said John H. Robinson, now deceased, Elva Robinson and Mary Ellen Davis Elva Robinson and Mary Ellen Davis 43A/440

Elva Robinson and Mary Ellen Davis Andrew L. Henry, Charles E. Reed, and Harry R. Cronin, Jr. 44A/92

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APR 30 2018

WV Department of Environmental Protection  
 2600 958  
 158A/554

47 103 03233

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SWN A WTZ 5H

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WV Department of  
Environmental Protection

		Katherine A. Henry and Harry R. Cronin, Jr. Wetzel Co	Charles E. Reed and Kathryn C. Reed, husband and wife		1A/241
		Kathryn C. Reed, a widow and unmarried	Carl Perkins		55A/54
		Carl D. Perkins and Dorothy Louise Perkins, his wife	Perkins Oil and Gas, Inc., a West Virginia Corporation		84A/9
		Perkins Oil & Gas Inc., a West Virginia corporation	Stone Energy Corporation, a Delaware corporation		126A/958
		Stone Energy Corporation	Chesapeake Appalachia, LLC,, and Statoil USA Onshore Properties, Inc.		158A/554
		Chesapeake Appalachia, L.L.C.,	SWN Production Company, LLC		167A/9
3	12-15-9	John Pyles, a single man (Donna O. Smittle; Unknown Heirs of Russell Pyles; David Scott Palmer; Pamela Ann Palmer Emch; Mary Jo Burton; Naomi Madelyn Jones; Linda Lee Roberts; Pamela Doreen Burlingame)	Earl M. Hennen	12.50%	6A/5
		Earl M. Hennen	Hope Natural Gas Company		
		Hope Natural Gas Company	The Manufacturers Light and Heat Company		40A/468
		Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
		Columbia Gas Transmission Corporation	SWN Production Company, LLC		188A/278

47 103 03233

**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  
SWN A WTZ 5H

---

4 12-10-28 F.C. Emch and Thelma Emch, his wife; Jerald Yocum and Mildred Yocum, his wife; Iva M. Gray and Bud Gray, her husband; Ocia Williams and Hobert Williams, her husband; Arlie Young and Virgil Young, her husband; Ica Harlan and Elmer Harlan, her husband (Albert Benedetti; Virginia Lee Dailey; Yvonne Goschinski; Lucille Mitchell; Kathy Noffsinger; Wayne Young; David Young; Austin Young; Judy Thompson; Darlene Braun; B. Kenneth Richmond; Edward G. Strobe; Roger S. Strobe; Charles B. Strobe; Gary W. Strobe; Daniel K. Strobe; Carla Sue Strahl; Judith Greer; Mary Francis Leaver Gray; Richard Dean Gray; Ellsworth Harlan; Terry Lynn Harlan; Mary Ellen Harlan; Charlene Herchick; John E. Harlan; Richard Dean Harlan; Starla J. Power; Tim Harlan; Patricia Ann Toharchick; Nancy Jane Terman; Hobert Edward Williams; Norma June Williams; Robert R. Taylor II; Terry Lee Taylor; Bradley Randall Taylor; Ray Francis McIntire; Unknown Heirs or Assigns of Mildred Cook Yocum Miller; Terry McIntire; Pamela Hartzler; Carol Anderson Bordner; Dale F. McIntire; Jackie McIntire; Bradley F. Dement; Resource Minerals Headwater I, LP)

12.50% 47A/48

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 APR 30 2018  
**WV Department of Environmental Protection**

Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	263/164
Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	84A/129
Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.	402/446

47103 03233

**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.P., Operator  
SWN A WTZ 5H

	Chesapeake Appalachia, L.L.C.	Wetzel Co	SWN Production Company, LLC	
	Columbia Gas Transmission Corporation		SWN Production Company, LLC	
5	12-10-16	T. J. Yoho and Etheel Yoho, his wife (Bradley Yoho; Clayton Yoho; Darren Yoho; Donna Yoho; Jeffrey J. Yoho; Kevin Yoho; Carol A. Darrow; Janet S. Hinerman; Sharon Hinerman; Kimela Ann Matthews; Nancy G. Metheny; Nancy Nonemaker; Linda Buckey; Yolanda Meade; Della D. Hairston; Darlene Ahalt; Dallas O. Moledor; Dalvin D. Horton; Deborah D. Yoho Showalter; Berneda Ward; Chalmer Yocum; Virginia Carol Riffle; Lindsey Noel Yocum; Thomas Leon Yocum; James E. Yocum; Paul Franklin Yocum; Tammy Kay Beohm; Joseph lee Watkins; John Noel Gallagher; Lisa Bowen; Charlene D. Wildman; Susan Darlene Moore; Teresa Lynn Lemley; Shirley Fitzsimmons; Brent Alan Snider; Bryan Glen Snider; Julie Dawn Snider; Scott Eric Snider; Quentin Yocum; Jack Hammers; Paul Hammers; Wesbanco Bank of Wheeling, Trustee under Trust Agreement of Twila Whipkey dated August 25, 1999; Toni Jo Mason; Erica Mason; O. E. Burge et al, Trustees of the O. E. Burge Trust and the Sarah L. Burge Trust)	The Manufacturers Light and Heat Company	12.50%
	Manufacturers Light and Heat Company		Columbia Gas Transmission Corporation	263/164
	Columbia Gas Transmission Corporation		Columbia Natural Resources, LLC	84A/129
	Columbia Natural Resources, LLC		Chesapeake Appalachia, L.L.C.	402/446
	Chesapeake Appalachia, L.L.C.		SWN Production Company, LLC	157A/540

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APR 30 2018  
157A/540  
188A/278  
48A/481

West Virginia Department of Environmental Protection

47 103 03233

**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  
SWN A WTZ 5H

6 12-10-15 Iva Gray and Bud Gray, her husband; Jerald Yocum and Mildred Yocum, his wife; Alta Pyles, widow; Ocia Williams and Hobert Williams, her husband; Ica Harlan and Elmer Harlan, her husband; Arlie Young and V. A. Young, her husband; Lelah McIntire and Troy McIntire, her husband  
(Albert L. Benedetti; Yvonne Goschinski; Lucille Mitchell; Wayne Young; David Young; Austin Young; Judy Thompson; Darlene Braun; B. Kenneth Richmond; Edward G. Strobe; Roger S. Strobe; Charles B. Strobe; Gary W. Strobe; Daniel K. Strobe; Carla Sue Strahl; Judith Greer; Zane Gray; Richard Dean Gray; Virginia Harlan; Mary Ellen Harlan; Charlene Herchick; John E. Harlan; Starla J. Power; Tim Harlan; Patricia Ann Toharchick; Nancy Jane Terman; Hobert Edward Williams; Norma June Williams; Robert R. Taylor, II; Terry Lee Taylor; Bradley Randall Taylor; Gary Yocum and Lavern Yocum (life tenants) and Cris Yocum (remainderman); Ray Francis McIntire; Pamela Hartzler; Carol R. Anderson Bordner; Dale F. McIntire; Bradley F. Dement)

West Virginia  
Wayne County, West Virginia

12.50%

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44A/1

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Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	263/164
Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	84A/129
Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.	402/446
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	157A/540



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**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  
SWN A WTZ 5H

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7 12-10-10 James J. Postlewait, single; William Postlethwait, single; The Manufacturers Light and Heat Company 12.50%  
 C. W. Postlethwait, single; J. B. Postlethwait, single;  
 Pearl Johnson and Oscar A. Johnson, her husband; Eva  
 A. Rutan and Dock Rutan, her husband; Elmer F. Poole  
 and Edna Poole, his wife; Lloyd W. Postlewait and  
 Adelia A. Postlewait, his wife; Arlie E. Eisenhauer,  
 widow; Verl W. Postlewait and Grace Postlewait, his  
 wife; Ota Williams and William H. Williams, her  
 husband; Luther Martin, single; Thomas B Dunham and  
 Blanche Dunham, his wife; William Martin and Pearl  
 Martin, his wife; Robert J. Martin and Mary J. Martin,  
 his wife; Arminta E. Deason and Eno Deason, her  
 husband; Betty J. Jones and Howard S. Jones, JR., her  
 husband; Esther M. Preece and Sheldon C. Preece, her  
 husband; Oma Z. Stern and Cullen B. Stern, her  
 husband  
 (O. E. Burge; Waco Oil and Gas Company)

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Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	263/164
Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	84A/129
Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.	402/446
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	157A/540

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**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  
SWN A WTZ 5H

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8	12-10-9	Ray C. Herman, single and Dail A. Herman, single (Rose Mary Herman; Bula Burton; Virginia Amos; Ruby Sylvester; Charles George Hunter; Faye Young; Ray Herman, JR.; Sharla Chapman; Faye Sturgis; Fern Jones; Franklin B. Baker, III; Charles Herman Baker; Francis R. Goddard; Ronald Goddard; Brenda Lee Powell; Wayne Edward Goddard, JR.; David Allen Goddard)	Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C.	12.50%	45A/324
			Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Natural Resources, LLC Chesapeake Appalachia, L.L.C.		263/164 84A/129 402/446 157A/540
9	12-10-2	Bula Burton, a widow Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	92A/647 157A/540
9	12-10-2	Rose Mary Herman, a widow Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	92A/638 157A/540
9	12-10-2	Ruby Sylvester, a widow (Bonita Sylvester Wilcox Lucas) Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	92A/641 157A/540
9	12-10-2	Virginia M. Amos, a widow (Unknown Heirs and Assigns of Virginia M. Amos) Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	92A/644 157A/540
9	12-10-2	Charles George Hunter, a married man dealing in his sole and separate property Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	92A/632 157A/540
9	12-10-2	Faye Young, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC	12.50%	92A/635

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 SWN A WTZ 5H

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		Chesapeake Appalachia, LLC	Wetzel Co SWN Production Company, LLC		
9	12-10-2	Francis R. Goddard Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	101A/209 157A/540
9	12-10-2	Wayne L. Goddard, a/k/a Wayne Goddard Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	101A/212 157A/540
9	12-10-2	Ronald L. Goddard, a/k/a Ronald Goddard Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	101A/188 157A/540
9	12-10-2	Faye L. Sturgis Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	100A/990 157A/540
9	12-10-2	Chalres H. Baker Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	100A/987 157A/540
9	12-10-2	Feryn L. Jones Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	100A/984 157A/540
9	12-10-2	Franklin B. Baker, III, a single man Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	101A/643 157A/540
9	12-10-2	Sharla Chapman, a married woman dealing in her sole and separate property Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	102A/32 157A/540
9	12-10-2	Ray C. Herman, Jr., a married man dealing in his sole and separate property Chesapeake Appalachia, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	102A/1 157A/540
10	12-10-1.1	Otis Simmons and Pearl Simmons, his wife; Harold S. Simmons and Roxie Simmons, his wife; Roxie Newman and Archie Newman, her husband (Robert L. Newman; Roxie Simmons; Everett Simmons)	The Manufacturers Light and Heat Company	12.50%	39A/498
		Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164

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**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

SWN A WTZ 5H

Columbia Gas Transmission Corporation      Wetzel County, West Virginia  
 Columbia Natural Resources, LLC  
 Chesapeake Appalachia, L.L.C.

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 84A/129  
 402/446  
 176A/747  
 39A/498  
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11	12-10-1	Otis Simmons and Pearl Simmons, his wife; Harold S. Simmons and Roxie Simmons, his wife; Roxie Newman and Archie Newman, her husband (Robert L. Newman; Roxie Simmons; Everett Simmons)	The Manufacturers Light and Heat Company	12.50%	39A/498
		Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		263/164
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		84A/129
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		176A/747
12	12-4-38	Emmit Burge and Sarah L. Burge, his wife (Emmit Burge and Sarah Burge, trustees of the Onward E. Burge and Sarah L. Burge Trust)	Chesapeake Appalachia, L.L.C.	12.50%	86A/202
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		
12	12-4-38	Mark Massari, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	99A/16
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
13	12-4-26	Vivian Dillon, a married woman dealing in her sole and separate property	Columbia Natural Resources, LLC	12.50%	84A/401
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		402/446
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540

47 1 0 3 0 3 2 3 3

March 14, 2018

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

**RE:** SWN's proposed New Well: SWN A WTZ 5H in Wetzell County, West Virginia, Drilling under Middle Fork Road, Hollman Ridge Road, Lynn Camp Road, and Old WV 89.

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 Middle Fork Road, Hollman Ridge Road, Lynn Camp Road, and Old WV 89.. 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,



Caleb Weaver  
Senior Landman  
SWN Production Company, LLC

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The Right People doing the Right Things,  
wisely investing the cash flow from our  
underlying Assets, will create Value+®

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

Date of Notice Certification: 4/27/18

API No. 47- 103 -  
Operator's Well No. SWN A WTZ 5H  
Well Pad Name: SWN A WTZ 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>530904.97</u>
County:	<u>103- Wetzel</u>		Northing:	<u>4392593.48</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Macedonia Ridge</u>	
Quadrangle:	<u>Wileyville</u>	Generally used farm name:	<u>SWN A</u>	
Watershed:	<u>Upper Ohio South</u>			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

\*PLEASE CHECK ALL THAT APPLY

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

OOG OFFICE USE ONLY

- RECEIVED/ NOT REQUIRED
- RECEIVED
- RECEIVED/ NOT REQUIRED
- RECEIVED
- RECEIVED
- RECEIVED

**Required Attachments:**

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

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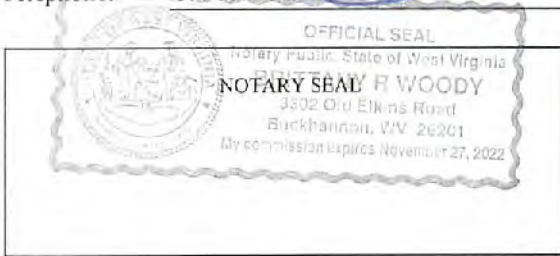
4710303233

**Certification of Notice is hereby given:**

THEREFORE, I Dee Southall, 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: Dee Southall  
Its: Senior Regulatory Analyst  
Telephone: 304-884-1610

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



Subscribed and sworn before me this 13<sup>th</sup> day of March 2018  
Brittany R. Woody Notary Public  
My Commission Expires 11/27/22

**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](mailto:depprivacyofficer@wv.gov).

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**WW-6A NOTICE OF APPLICATION NOTARIZED W/ANY  
ATTACHMENTS**

**TOPOGRAPHIC MAP WITH LABELED SURROUNDING  
WATER WELLS**

**CERTIFIED MAIL RECEIPTS FOR WW-6A**

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

47 103 03233

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

Date of Notice: 4/27/18 Date Permit Application Filed: 4/27/18

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: SWN Production Company, LLC  
Address: PO Box 672625  
Houston, TX 77267  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: CNX Gas Company, LLC  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317  
 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: None  
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  
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OWNERNAME	ADDRESS	CITY/STATE/ZIP	WATERSOURCES
YEATER TERRY W & DORIS	HC 60 BOX 257	NEW MARTINSVILLE, WV 26155	1
YOHO NORMA F	828 GREENLAWN AVE NW	WARREN, OH 44483	2
YOCUM GARY G & LAVERNE F	HC 60 BOX 252	NEW MARTINSVILLE, WV 26155	4
BICKERSTAFF JACOB & ANNA	14383 PROCTOR CREEK RD	NEW MARTINSVILLE, WV 26155	1
CALVERT RODNEY A	13998 PROCTOR CREEK RD	NEW MARTINSVILLE, WV 26155	7

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**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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 variance granted shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, activities 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 or production of oil or gas that relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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Such persons may request, at the time of submitting written comments, notice of the permit application and be required 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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WW-6A  
(8-13)

API NO. 47- 103 -  
OPERATOR WELL NO. SWN A WTZ 5H  
Well Pad Name: SWN A WTZ Pad  
**47 103 03233**

**Notice is hereby given by:**

Well Operator: SWN Production Co., LLC  
Telephone: 304-884-1614  
Email: Dee\_Southall@swn.com

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



Subscribed and sworn before me this 13<sup>th</sup> day of March 2018  
Brittany R. Woody Notary Public  
My Commission Expires 11/27/2022

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WV Department of  
Environmental Protection

47 10303233

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:** 10/18/2017      **Date of Planned Entry:** 10/25/2017

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: Troy Sidenstricker and Lisa Sidenstricker  
 Address: 14303 Proctor Circle Road  
New Martinsville, WV 26155  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: CNX Gas Company, LLC  
 Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

MINERAL OWNER(s)  
 Name: Ruth Ann Calvert  
 Address: 12666 Shortline Hwy. Apt #3  
Pine Grove, WV 26419  
 \*please attach additional forms if necessary

Notice is hereby given:

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

State:	<u>WV</u>	Approx. Latitude & Longitude:	<u>39.884757, -80.640554</u>
County:	<u>Wetzel</u>	Public Road Access:	<u>RL 89</u>
District:	<u>Proctor</u>	Watershed:	<u>Fish Creek</u>
Quadrangle:	<u>Wileyville</u>	Generally used farm name:	<u>SWN A WTZ Pad</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 601-57<sup>th</sup> 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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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: \_\_\_\_\_

WV Department of Environmental Protection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [deprivacyofficer@wv.gov](mailto: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: 10/18/2017 Date of Planned Entry: 10/25/2017

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.

Notice is hereby provided to:

SURFACE OWNER(s)
Name:
Address:
Name:
Address:
Name:
Address:

COAL OWNER OR LESSEE
Name:
Address:

MINERAL OWNER(s)
Name: Carla E Rabel
Address: 810 Wetzel Tyler Ridge Road
New Martinsville, WV 26155
\*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: WV
County: Wetzel
District: Proctor
Quadrangle: Wileyville
Approx. Latitude & Longitude: 39.684757, -80.640554
Public Road Access: Rt. 89
Watershed: Fish Creek
Generally used farm name: SWN A WTZ Pad

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 this notice may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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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:

WV Department of Environmental Protection

Oil and Gas Privacy Notice:

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



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STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF 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:** 10/18/2017 **Date of Planned Entry:** 10/25/2017

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: Connie Jean Rowland  
Address: 535 Briarcliff Court  
New Martinsville, WV 26155

<sup>4</sup>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: WV  
County: Wetzel  
District: Proctor  
Quadrangle: Wileyville

Approx. Latitude & Longitude: 39.684757, -80.640554  
Public Road Access: Rt. 99  
Watershed: Fish Creek  
Generally used farm name: SWN A WTZ Pad

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 1/2 Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling gas obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC  
Telephone: 304-884-1610  
Email: dee\_southall@swn.com or britlany\_woody@swn.com

Address: PO BOX 1300  
JANE LEW, WV 26378  
Facsimile: \_\_\_\_\_

WV Department of  
Environmental Protection

Oil and Gas Privacy Notice:

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

47 10303233

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:** 10/19/2017      **Date of Planned Entry:** 10/25/2017

**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: Cathy Williams  
 Address: 426 Hook Street  
Bridgeville, PA 15017  
 \*please attach additional forms if necessary

**Notice is hereby given:**

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.684757, -80.640554</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rt. 89</u>
District: <u>Proctor</u>	Watershed: <u>Fish Creek</u>
Quadrangle: <u>Wilayville</u>	Generally used farm name: <u>SWN A WIZ Pad</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 17th 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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**Notice is hereby given by:**

Well Operator: SWN PRODUCTION COMPANY, LLC  
 Telephone: 304-834-1510  
 Email: dee\_southall@swn.com or brittany\_woody@swn.com

Address: PO BOX 1300  
JANE LEW, WV 26378  
 Facsimile: \_\_\_\_\_

WV Department of  
Environmental Protection

**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](mailto:depprivacyofficer@wv.gov).

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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

Date of Notice: 10/18/2017 Date of Planned Entry: 10/25/2017

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: Nancy G Melhony  
Address: 3648 N. Park Ave  
Warren, OH 44481

\*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: WV  
County: Wetzel  
District: Proctor  
Quadrangle: Wileyville

Approx. Latitude & Longitude: 39.634757, -80.640554  
Public Road Access: Rt. 89  
Watershed: Fish Creek  
Generally used farm name: SWN A WTZ Pad

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 57<sup>th</sup> 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

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Office of Oil and Gas

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Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC  
Telephone: 304-884-1610  
Email: dee\_southall@swn.com or brittany\_wcoody@swn.com

Address: PO BOX 1300  
JANE LEW, WV 26378  
Facsimile: \_\_\_\_\_

WV Department of  
Environmental Protection

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](mailto:depprivacyofficer@wv.gov).

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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

Date of Notice: 10/18/2017 Date of Planned Entry: 10/25/2017

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: Vicki Forrester  
 Address: HC 74 Box 66  
Alma, WV 26320  
 \*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.584757, -80.540554</u>
County: <u>Weizel</u>	Public Road Access: <u>RL 89</u>
District: <u>Proctor</u>	Watershed: <u>Fish Creek</u>
Quadrangle: <u>Wileyville</u>	Generally used farm name: <u>SWN A WTZ Pad</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 615 State St, 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

RECEIVED  
Office of Oil and Gas

APR 30 2018

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: \_\_\_\_\_

WV Department of  
Environmental Protection

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](mailto:depprivacyofficer@wv.gov).

4710303233

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

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

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

**Date of Notice:** 03/09/2018 **Date Permit Application Filed:** 4/27/18

**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: SWN Production Company, LLC  
Address: PO Box 672625  
Houston, TX 77267

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: West Virginia	UTM NAD 83 Easting: 530,904.97
County: Wetzel	Northing: 4,392,593.48
District: Proctor	Public Road Access: Macedonia Ridge
Quadrangle: Wileyville, WV	Generally used farm name: SWN A WTZ
Watershed: Upper Ohio South	

**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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: 832-540-1136  
Email: Steve\_Teel@swn.com  
Facsimile: 304-884-1691

Authorized Representative: Steve Teel  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 832-540-1136  
Email: Steve\_Teel@swn.com  
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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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Environmental Protection

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

47 10303233

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:** 04/17/2018 **Date Permit Application Filed:** 4/17/18

**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: CNX Gas Company, LLC  
Address: 1000 Consol Energy Drive  
Canonsburg, PA 15317

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	Eastings:	<u>530,904.97</u>
County:	<u>Wetzel</u>		Northing:	<u>4,392,593.48</u>
District:	<u>Proctor</u>	Public Road Access:	<u>Macedonia Ridge</u>	
Quadrangle:	<u>Wileyville, WV</u>	Generally used farm name:	<u>SWN A WTZ</u>	
Watershed:	<u>Upper Ohio South</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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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: 832-540-1136  
Email: Steve\_Teel@swn.com  
Facsimile: 304-884-1691

Authorized Representative: Steve Teel  
Address: PO Box 1300, 179 Innovation Drive  
Jane Lew, WV 26378  
Telephone: 832-540-1136  
Email: Steve\_Teel@swn.com  
Facsimile: 304-884-1691

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APR 30 2018  
WV Department of  
Environmental Protection

WW-6A5  
(1/12)

Operator Well No. SWN A W T Z 5H

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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: 03/08/2018 Date Permit Application Filed: 4/27/18

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED  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: SWN Production Company, LLC Name: \_\_\_\_\_  
Address: PO box 672625 Address: \_\_\_\_\_  
Houston, TX 77257

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 530,904.97  
County: Wetzel Northing: 4,392,593.48  
District: Procter Public Road Access: Macedonia Ridge  
Quadrangle: Wileyville, WV Generally used farm name: SWN A W T Z  
Watershed: Upper Ohio South

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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

Well Operator: SWN Production Company, LLC Address: PO Box 1300, 179 Innovation Drive  
Telephone: 832-540-1136 Jane Lew, WV 26378  
Email: Steve\_Teel@SWN.com Facsimile: 304-884-1691

Oil and Gas Privacy Notice:

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Office of Oil and Gas

APR 30 2018

WV Department of  
Environmental Protection

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

47 10 30 32 33

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

**Date of Notice:** 04/17/2018      **Date Permit Application Filed:** 4/17/18

**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):

<b>Name:</b> <u>CNX Gas Company, LLC</u>	<b>Name:</b> _____
<b>Address:</b> <u>1000 Consol Energy Drive</u>	<b>Address:</b> _____
<u>Canonsburg, PA 15317</u>	

**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:

<b>State:</b> <u>West Virginia</u>	<b>UTM NAD 83 Easting:</b> <u>530,904.97</u>
<b>County:</b> <u>Wetzel</u>	<b>Northing:</b> <u>4,392,593.48</u>
<b>District:</b> <u>Proctor</u>	<b>Public Road Access:</b> <u>Macedonia Ridge</u>
<b>Quadrangle:</b> <u>Wileyville, WV</u>	<b>Generally used farm name:</b> <u>SWN A WTZ</u>
<b>Watershed:</b> <u>Upper Ohio South</u>	

**This Notice Shall Include:**

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

<b>Well Operator:</b> <u>SWN Production Company, LLC</u>	<b>Address:</b> <u>PO Box 1300, 179 Innovation Drive</u>
<b>Telephone:</b> <u>832-540-1136</u>	<u>Jano Lew, WV 26378</u>
<b>Email:</b> <u>Steve_Teel@SWN.com</u>	<b>Facsimile:</b> <u>304-884-1691</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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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APR 30 2018

WV Department of  
Environmental Protection





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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

March 26, 2018

Jill M. Newman  
Deputy Commissioner

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

Subject: DOH Permit for the SWN A WTZ Pad, Wetzel County  
SWN A WTZ 5H

Dear Mr. Martin,

The West Virginia Division of Highways has issued Permit #06-2018-0223 for the subject site to Southwestern Energy for access to the State Road for the well site located off of Wetzel 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,

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

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

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Office of Oil and Gas

APR 30 2018

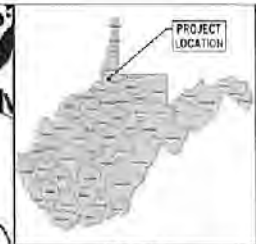
WV Department of  
Environmental Protection

FRAC ADDITIVES			
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	67-56-1
		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

**NOTES**

1. THIS PLAN IS FOR GRADING, STORMWATER SYSTEMS, AND EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. PROPERTY INFORMATION SHOWN HEREBIN IS FROM GIS DATA PROVIDED BY SOUTHWESTERN ENERGY PRODUCTION COMPANY AND HAS NOT BEEN FIELD VERIFIED.
3. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SET FULLY DEPICTS ALL WORK ASSOCIATED WITH THIS PROJECT.
4. SOIL TYPE BOUNDARY AND CHARACTERISTICS SHOWN HEREIN WERE ACQUIRED FROM NRCS WEB SOIL SURVEY.
5. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEERING REPORT, DATED MARCH 21, 2017, PROVIDED BY GTA ENERGY, LLC FOR FULL SOIL, STABILIZATION TECHNIQUES TO BE IMPLEMENTED IN CONSTRUCTION OF CUT AND FILL SLOPES.
6. THE TOPOGRAPHIC SURVEY USED FOR THIS BASE MAPPING INSIDE THE LOD WAS PERFORMED BY JHA COMPANIES FROM JANUARY 03, 2017 TO JUNE 28, 2018.
7. TOPOGRAPHIC MAPPING OUTSIDE OF THE LOD IS FROM LIDAR DATA FROM WV GIS TECHNICAL CENTER.
8. NO TOPSOIL REMOVAL BETWEEN LIMIT OF CONSTRUCTION AND LIMIT OF DISTURBANCE VEGETATIVE BUFFER TO REMAIN.
9. FILL WILL BE COMPACTED TO 98% OF STANDARD PROCTOR DENSITY (ASTM #98). FILL LIFT THICKNESS WILL BE NO GREATER THAN 12". NOTHING FROZEN OR TOO WET WILL BE PLACED IN FILL AREAS. PARTICLE SIZE OF THE FILL WILL BE NO GREATER THAN 6" AND FREE OF OBJECTIBLE MATERIAL.

# EROSION AND SEDIMENT CONTROL PLAN FOR SWN PAD A PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA WILEYVILLE 7.5 MINUTE QUAD MAPS



LOCATION MAP NOT TO SCALE		
NO.	DATE	DESCRIPTION
1	08/05/18	REVISED PER DDP COMMENTS

ENGINEER'S ESTIMATE OF QUANTITIES		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
1/2" COMPOST FILTER DOCK	135	LF
2 1/2" COMPOST FILTER DOCK	4,476	LF
ROUGH CONSTRUCTION ENTRANCE R-1.8 SLOPE RATE	84	CY
CLASS 4 GEOTEXTILE (MATERIAL UNDERLAYMENT)	424	SY
500' REESEL AREA	7.2	AC
PROPOSED STORM CATCHBASINS	5	EA
18" DIPS STORM PIPE (600' LAND 1)	142.5	LF
4" HDPE STORM PIPE (500')	40	LF
OUTLET PROTECTION	7	EA
4" PERFORATED 15' DIA 40' PIPE (PAD UNDERDRAIN)	1,735	LF
4" SOLID PVC 15' DIA 40' PIPE (CATCH-BASIN OUTLET)	40'	LF
WELL PAD PERIMETER BERM	1,745	LF
1" GAGE VALVES	5	EA
4" PERFORATED 30" DIA 5' HES (FILL SLOPE REINFORCEMENT)	3,975	LF
4" SOLID PVC 30" DIA 5' HES (BENCH DRAIN COLLECTOR)	126	LF
3/4" HOLES (BENCH DRAIN BEDDING)	1,445	TONS
PAD HEAVY DUTY 842 STONE (1')	1,090	CY
PAD HEAVY DUTY 81 STONE (14')	2,495	CY
PAD STANDARD 842 STONE (4')	2,770	CY
PAD STANDARD 81 STONE (15')	6,295	CY
ACCESS ROAD 842 STONE (4')	299	CY
ACCESS ROAD 81 STONE (12')	365	CY
PAD CLASS 2 GEOTEXTILE	15,840	SY
ACCESS ROAD 2' CLASS 2 GEOTEXTILE	1,309	SY
EARTHWORK VOLUMES GRP	57,825	CY
EARTHWORK VOLUMES FILL	55,805	CY
WELL COLUMNS	1	EA
GEOTUBES (EQUIVALENT CUT OR EQUIVALENT)	5480	SY
CLEARING AND GRUBBING	14	AC

PROJECT NARRATIVE  
PROPOSED CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH THIS DRAWING SET (43 PAGE SHEET SET, DATED 2018-07-17 & REVISIONS DATED 2018-08-03) AND THE GEOTECHNICAL ENGINEERING REPORT (GTA ENERGY, LLC REPORT), WHICH ARE COMPLEMENTARY AND HAVE THE SAME FORCE / EFFECT IN DEFINING THE REQUIREMENTS FOR THE PROJECT. IN THE EVENT OF DISCREPANCIES, IT IS REQUIRED TO IMMEDIATELY CONTACT THE ENGINEER (AGENT) FOR INTERPRETATION.

**PROJECT CONTACTS**  
**OPERATOR:**  
 SOUTHWESTERN ENERGY, LLC  
 178 INNOVATION DRIVE  
 JANE LEW, WV 26378  
 PHONE: (304) 854-1618  
 WWW.SWN.COM

**PROJECT COORDINATOR:**  
 KALAS TAYLOR  
 SOUTHWESTERN ENERGY, LLC  
 OPERATIONS ANALYST  
 178 INNOVATION DRIVE  
 JANE LEW, WV 26378  
 PHONE: (304) 884-1696  
 EMAIL: KALAS\_TAYLOR@SWN.COM

**ENGINEER:**  
 JHA COMPANIES  
 68011 VINEYARD ROAD  
 ST. CLAIRSVILLE, OHIO 43050  
 PHONE: (740) 695 6100  
 FAX: (740) 449-2342

**PROJECT MANAGER:**  
 JOHN DUBOWSKI

**ENVIRONMENTAL:**  
 WETLANDS OR SURFACE WATER INFORMATION WAS DELINEATED BY AJAY ENVIRONMENTAL CONSULTING, LLC DATED FEBRUARY 16, 2018 AND JULY 16, 2018

**TOPOGRAPHIC INFORMATION:**  
 GROUND SURVEY DATED JANUARY 28, 2018  
 DATUM: NAD 83 WEST VIRGINIA NORTH  
 VERT: NAVD 88

**APPROVED**  
**WVDEP OOG**  
 8/6/2018

**COORDINATES:**  
**PAD 1 SITE ENTRANCE (NAD 83)**  
 LAT: 39.682481  
 LONG: -80.638975  
**CENTER OF PAD 1 (NAD 83)**  
 LAT: 39.682509  
 LONG: -80.639728  
**STAGING PAD SITE ENTRANCE (NAD 83)**  
 LAT: 39.683187  
 LONG: -80.637249  
**CENTER OF STAGING PAD (NAD 83)**  
 LAT: 39.683770  
 LONG: -80.638525

SWN PAD A ONLY - 6.61 ACRES  
 SWN A STAGING PAD ONLY - 6.16 ACRES  
 SWN PAD A TOTAL PROJECT - 12.77 ACRES

LANDS N/F OF  
 SWN PRODUCTION COMPANY, LLC  
 TMP # 12-10-0029  
 BICKERSTAFF, JACOB AND ANNA  
 TMP # 12-10-0029.0002  
 LIMIT OF DISTURBANCE = 13.16 ACRES

DWG NO	DRAWING DESCRIPTION
C.001	COVER SHEET
C.002 - C.003	EVACUATION ROUTE / PREVAILING WINDS
C.101 - C.102	EXISTING CONDITIONS
C.201 - C.202	GRADING AND EROSION CONTROL PLANS
C.301 - C.302	RECLAMATION PLANS
C.401 - C.411	SLOPE STABILIZATION DETAILS & PROFILES
C.501 - C.503	DETAILS

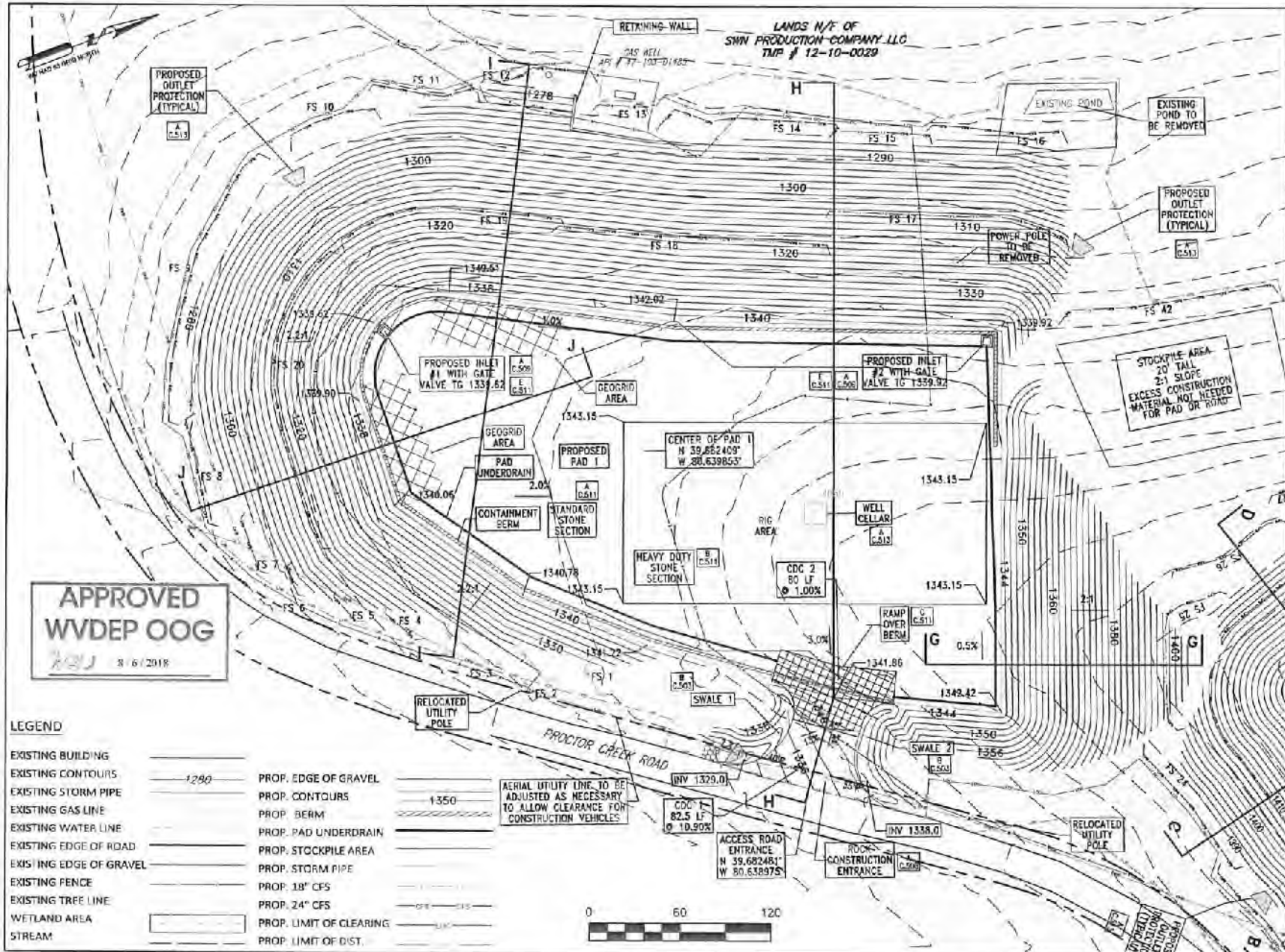
2 WORKING DAYS BEFORE YOU DAY  
 CALL TOLL FREE 800-245-4848  
 Miss Utility of West Virginia

PREPARED FOR:  
**SWN**  
 Southwestern Energy®

SEAL

**JHA Companies** SURVEYORS ENVIRONMENTAL GIS MAPPING  
 www.jhacompanies.com  
 68011 VINEYARD ROAD  
 ST. CLAIRSVILLE, OH 43950  
 (740) 695-6100  
 PA \* OH \* NY \* WV

PROJECT NO:	2017-030	DRAWN BY:	CLW
DATE:	08/05/2018	DESIGN BY:	CLW
SCALE:	AS NOTED	CHECKED BY:	JPD
<b>CONSTRUCTION PLANS FOR SWN PAD A</b>			
LOCATED IN PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA			
REV:	COVER SHEET		
PLAN SCALE:	FINAL	SHEET NO.:	C.001



**APPROVED WVDEP OOG**  
 8/6/2018

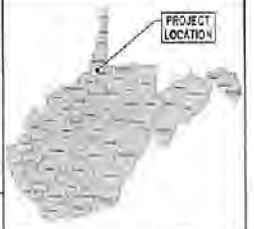
**LEGEND**

EXISTING BUILDING		PROP. EDGE OF GRAVEL	
EXISTING CONTOURS		PROP. CONTOURS	
EXISTING STORM PIPE		PROP. BERM	
EXISTING GAS LINE		PROP. PAD UNDERDRAIN	
EXISTING WATER LINE		PROP. STOCKPILE AREA	
EXISTING EDGE OF ROAD		PROP. STORM PIPE	
EXISTING EDGE OF GRAVEL		PROP. 18" CFS	
EXISTING FENCE		PROP. 24" CFS	
EXISTING TREE LINE		PROP. LIMIT OF CLEARING	
WETLAND AREA		PROP. LIMIT OF DIST.	
STREAM			

AERIAL UTILITY LINE TO BE ADJUSTED AS NECESSARY TO ALLOW CLEARANCE FOR CONSTRUCTION VEHICLES



LANDS N/E OF  
 SWN PRODUCTION COMPANY LLC  
 TMP # 12-10-0029



LOCATION MAP NOT TO SCALE

NO.	DATE	DESCRIPTION

2 WORKING DAYS BEFORE YOU DAY  
 CALL TOLL FREE  
 800-245-4848  
 Misc Utility of West Virginia

PREPARED FOR:  
**SWN**  
 Southwestern Energy



**JHA**  
 CONSULTANTS  
 SURVEYORS ENGINEERS ENVIRONMENTAL GIS MAPPING  
 www.jhacompanies.com  
 68011 VINEYARD ROAD  
 ST. CLAIRSVILLE, OH 43890  
 (740) 695-5100  
 PA. • OH • IN • WV

PROJECT NO.	2017-001 TRUNK SWN PAD A	DATE	08/02/2018
SCALE	AS NOTED	DRAWN BY	JSD

CONSTRUCTION PLANS FOR SWN PAD A  
 LOCATED IN PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA

TITLE	GRADING AND EROSION CONTROL PLAN	SHEET NO.	C.201
PLAN STATUS	FINAL		

THIS DOCUMENT SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE EXPRESS WRITTEN PERMISSION OF JHA CONSULTANTS