



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Friday, September 2, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359
SPRING, TX 773914954

Re: Permit approval for YOCUM MSH 210H
47-051-02465-00-00

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.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a faint circular stamp.

James A. Martin
Chief

Operator's Well Number: YOCUM MSH 210H
Farm Name: YOCUM, JOSEPH LEE & MICHIGAN
U.S. WELL NUMBER: 47-051-02465-00-00
Horizontal 6A New Drill
Date Issued: 9/2/2022

Promoting a healthy environment.

09/02/2022

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: _____

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.

09/02/2022

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

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

2) Operator's Well Number: Yocum MSH 210H Well Pad Name: Yocum MSH

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

4) Elevation, current ground: 1053' Elevation, proposed post-construction: 1053'

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

Other _____

(b) If Gas Shallow x Deep _____

Horizontal x

6) Existing Pad: Yes or No Yes

MJK 6/16/2022

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down-Dip Well to the South, Target Top TVD- 7278', Target Base TVD- 7321", Anticipated Thickness- 43', Associated Pressure- 4759

8) Proposed Total Vertical Depth: 7305'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22257'

11) Proposed Horizontal Leg Length: 14548.10'

12) Approximate Fresh Water Strata Depths: 437'

13) Method to Determine Fresh Water Depths: Salinity Profile calculations from logs on Yocum MSH 1H API 47-051-02133

14) Approximate Saltwater Depths: 986'- Salinity Profile calculations from logs on Yocum MSH 1H API 47-051-02133

15) Approximate Coal Seam Depths: 881'

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 x

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	126'	126'	CTS
Fresh Water	13 3/8"	New	H-40	48#	530'	530'	512 sx/CTS
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J/K-55	36/40#	2430'	2430'	851 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	22257'	22257'	Tall 4070sx/ 100' Inside Intermediate
Tubing							
Liners							

MSJK 6/16/2022

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	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Interm	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

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

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

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production units, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 12,500 psi @ 100 barrels a minute.

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

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

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

CEMENT ADDITIVES

INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTIER PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER) <i>up to 3%</i>	 	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION <i>up to 3%</i>	 	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
INTERMEDIATE	D020	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D047	FP 28L	 	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	 	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	CemNet	 	 	LOST CIRC MATERIAL	COATED FIBERGLASS FIBERS	PROPRIETARY
	SUGAR	SUGAR	CJ795	CMT RETARDER	SUCROSE	57-50-1
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
PRODUCTION	 	 	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	 	SS-11W	CJ880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	D047	FP 28L	 	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	 	 	CJX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	 	 	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATIC AMIDE POLYMER	PROPRIETARY
	D255	 	 	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	 	 	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
	 	FL-66	CJ501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	 	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	 	VISCOSIFIER/ANTI- SETTLING AGENT	REFINED POLYMER/ CHRYSTALLINE SILICA	PROPRIETARY
	D198	R-3		CEMENT RETARDER	LIGNIN	8068-51-6
SUGAR	SUGAR	CJ795	CEMENT RETARDER	SUCROSE	57-50-1	

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Southwestern Energy Company

Proposed Drilling Program

Well: YOCUM MSH 210
 Field: VICTORY FIELD WET
 County: MARSHALL
 SHL: 39.7328 Latitude -80.5838 Longitude
 BHL: 39.7074 Latitude -80.5415 Longitude
 KB Elev: 1,079 ft MSL

Re-entry Rig: SDC 41
 Prospect: Marcellus Shale
 State: WV
 KB: 26 ft AGL
 GL Elev: 1,053 ft MSL



No COAL VOID Anticipated

Gas Storage Interval : Not Applicable

PROD TOC Lead @ 2,630 ' MD

PROD TOC Tail @ 6,473 ' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	126'
Surface	13.375	48.0 #	H-40	0'	530'
Intm/Coal	9.625	36/40#	J/K-55	0'	2,430'
Production	5.5	20.0 #	P-110 HP	0'	22,257'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	512	A	15.6
Intermediate:	851	A	15.6
Production:	4070	A	14.5-15.6

126 ' to 550 '
Air/Mist

550 ' to 2,450 '
Air/Mist/Brine

Air/Mist/Brine

2,450 ' to 6,573 '
Air/Mist

Air/Mist
TD at 6,573'

6,573 ' to 7,707 '
12.0-12.5 ppg

7,707 ' to 22,257 '
12.4-12.8 ppg

KOP at 6,573 ' MD

Freshwater Depth - 437 ' TVD

Coal Depth - 881 ' TVD

Saltwater Depth - 986 ' TVD

TVD - 7,305'

TMD - 22,257'

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 TD at 22,257' MD
 7,305' TVD

7,141' Target Center TVD

Onondaga 7,323' TVD

EOB at 7,707' MD

SHL Onondaga 7,159' TVD

Created by: C R Hall on 06/10/2022

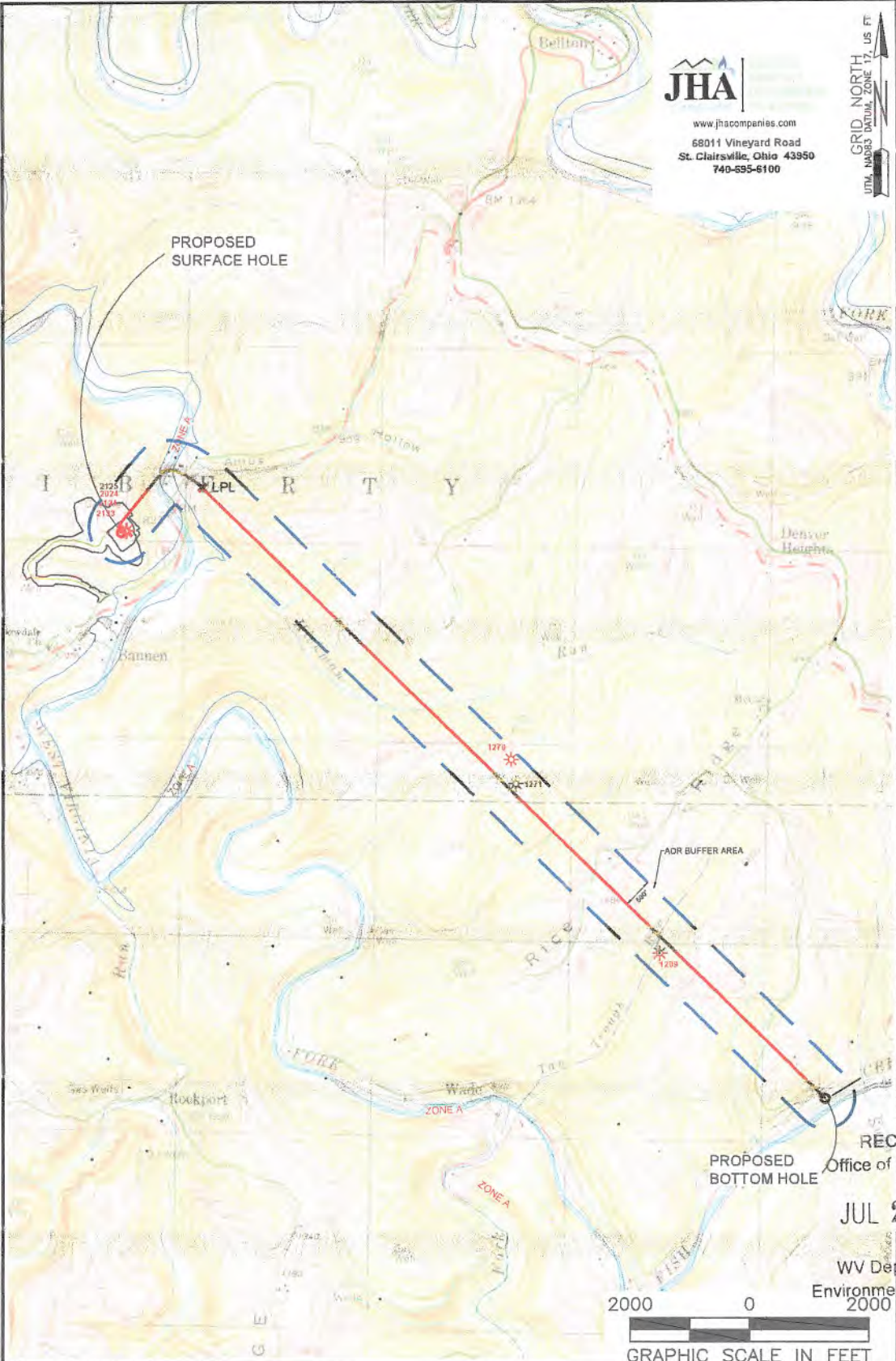
MGK 6/16/2022

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www.jhacompanies.com
 68011 Vineyard Road
 St. Clairsville, Ohio 43950
 740-895-6100

GRID NORTH
 UTM NORTH DATUM, ZONE 17 US FT



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NOTES ON SURVEY		LEGEND:		NATURAL WATERWAY	
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.		● PROPOSED SURFACE HOLE / BOTTOM HOLE		— ACCESS ROAD	
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.		* EXISTING / PRODUCING WELLHEAD		— PUBLIC ROAD	
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.		LPL * LANDING POINT LOCATION		— ACCESS ROAD TO PREV. SITE	
		● FLOOD PLAN		— LEASE BOUNDARY	
				— PROPOSED PATH	
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC		WELL (FARM) NAME: YOCUM MSH		WELL # 210H	
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508		COUNTY: MARSHALL		DISTRICT: LIBERTY	
SURFACE OWNER: JOSEPH LEE AND MICHAEL D. YOCUM		CODE: 9		API # 47-009-XXXX	
		USGS 7 1/2 QUADRANGLE MAP NAME: WILEYVILLE, WV			

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WW-9
(4/16)

API Number 47 - 051 - _____
Operator's Well No. Yocum MSH 210H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Upper Ohio South Quadrangle Littleton

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number Various Approved Facilities)
- Reuse (at API Number At the next anticipated well)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain recovery and solidification on site)

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

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

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

Additives to be used in drilling medium? Attachment 3B

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 Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013,

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

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

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

Company Official Signature *Brittany Woody*
Company Official (Typed Name) Brittany Woody
Company Official Title Senior Regulatory Analyst

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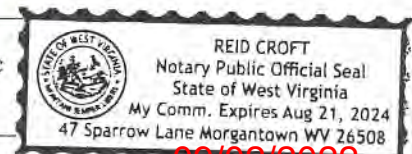
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Subscribed and sworn before me this 15th day of June, 2022

Neil Cuff Notary Public

My commission expires 8/21/2024



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SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 27.93 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 16.7

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Attachment 3C			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: *Harold Knott*

Comments: _____

Title: Oil & Gas Inspector

Date: 6/16/2022

Field Reviewed? Yes No

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Attachment 3A

CLOSED LOOP SYSTEM

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

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

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

AIR DRILLING INTERVALS

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

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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

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Attachment 3B

Drilling Mediums

Surface/Coal(if present)/Freshwater Intervals:

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

Production Hole:

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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WVD Seeding Specification

R²
A → V⁺

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 Apply @ 200lbs per acre Oct. 15th- April 15th	
Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre

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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
1300 Fort Pierpont Drive, Suite 201
Morgantown, West Virginia 26508

API NO. 47-XXX-XXXXX
WELL NAME: Yocum MSH 210H
Littleton QUAD
Liberty DISTRICT
Ohio COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody

A handwritten signature in blue ink that reads "Brittany Woody".

Date: 5/31/2022

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: [Signature]

Date: 6/16/2022

Title: _____

Approved by:

Name: _____

Date: _____

Title: _____

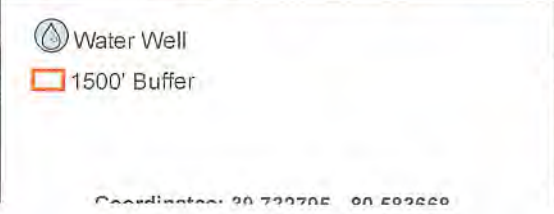
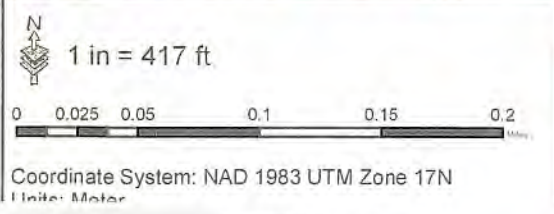
SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

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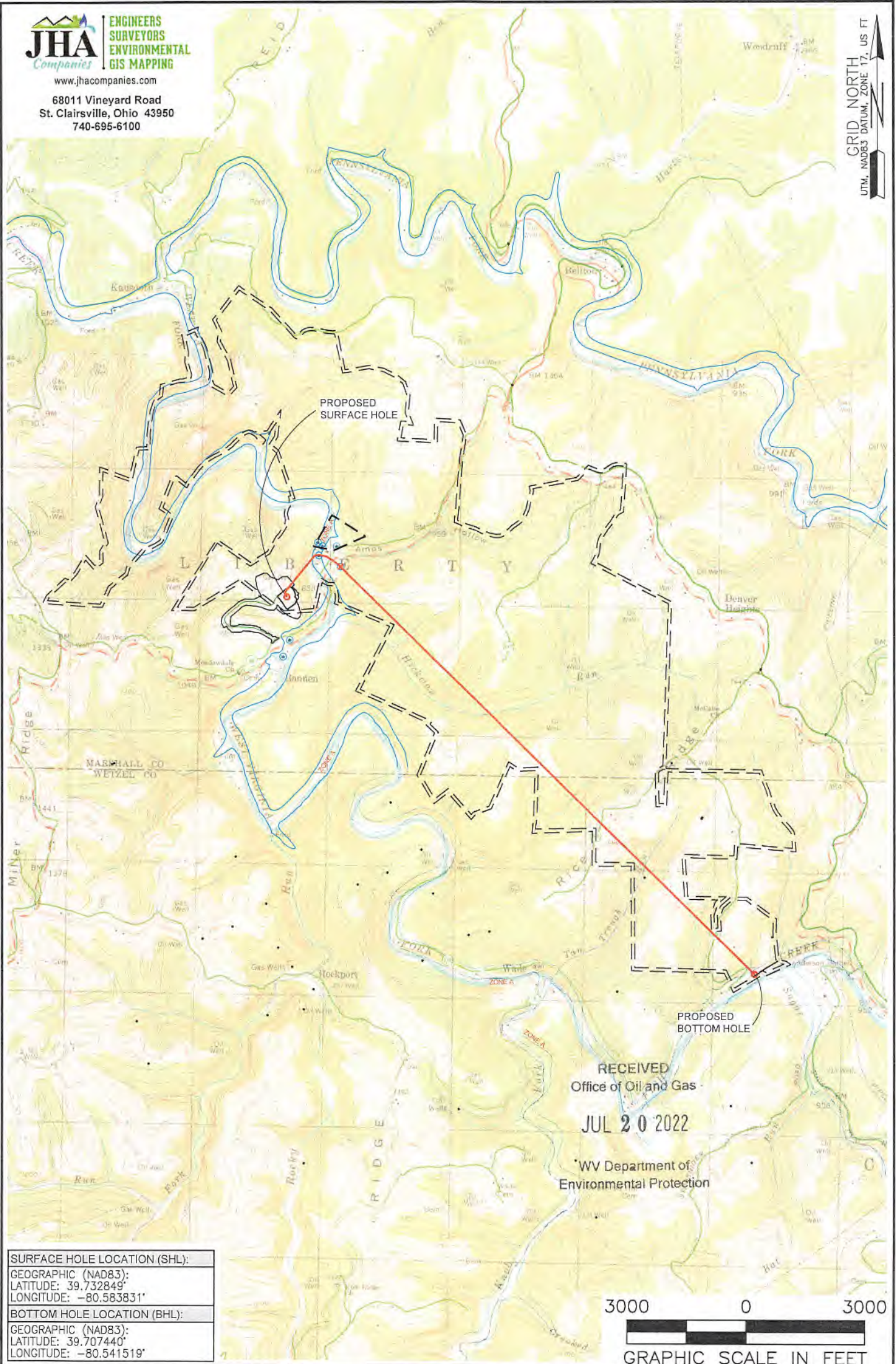
Water Purveyor Map
Well Pad: Yocum
County: MSH

SWN *PL 111*
Southwestern Energy®

Date: 4/19/2018 | Author: willish

09/02/2022

Coordinates: 90 732705 90 592659



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.732849°
LONGITUDE: -80.583831°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.707440°
LONGITUDE: -80.541519°



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	NATURAL WATERWAY
EXISTING / PRODUCING WELLHEAD	ACCESS ROAD
LPL LANDING POINT LOCATION	PUBLIC ROAD
FLOOD PLAIN	ACCESS ROAD TO PREV. SITE
	LEASE BOUNDARY
	PROPOSED PATH

09/02/2022

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: YOCUM MSH	WELL # 210H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY: MARSHALL	CODE: 103	DISTRICT: LIBERTY
SURFACE OWNER: JOSEPH LEE AND MICHAEL D. YOCUM	USGS 7 1/2 QUADRANGLE MAP NAME: WILEYVILLE, WV		

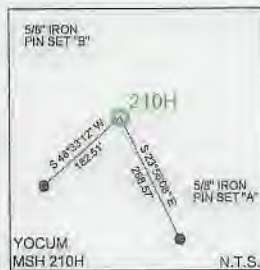
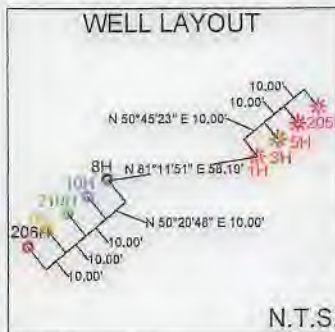
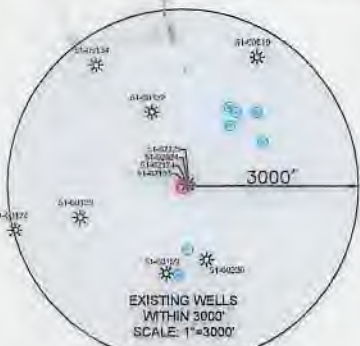
LATITUDE: 39°45' SURFACE HOLE (2000' SCALE) 111'

LATITUDE: 39°42'30" BOTTOM HOLE (2000' SCALE) 11,489'

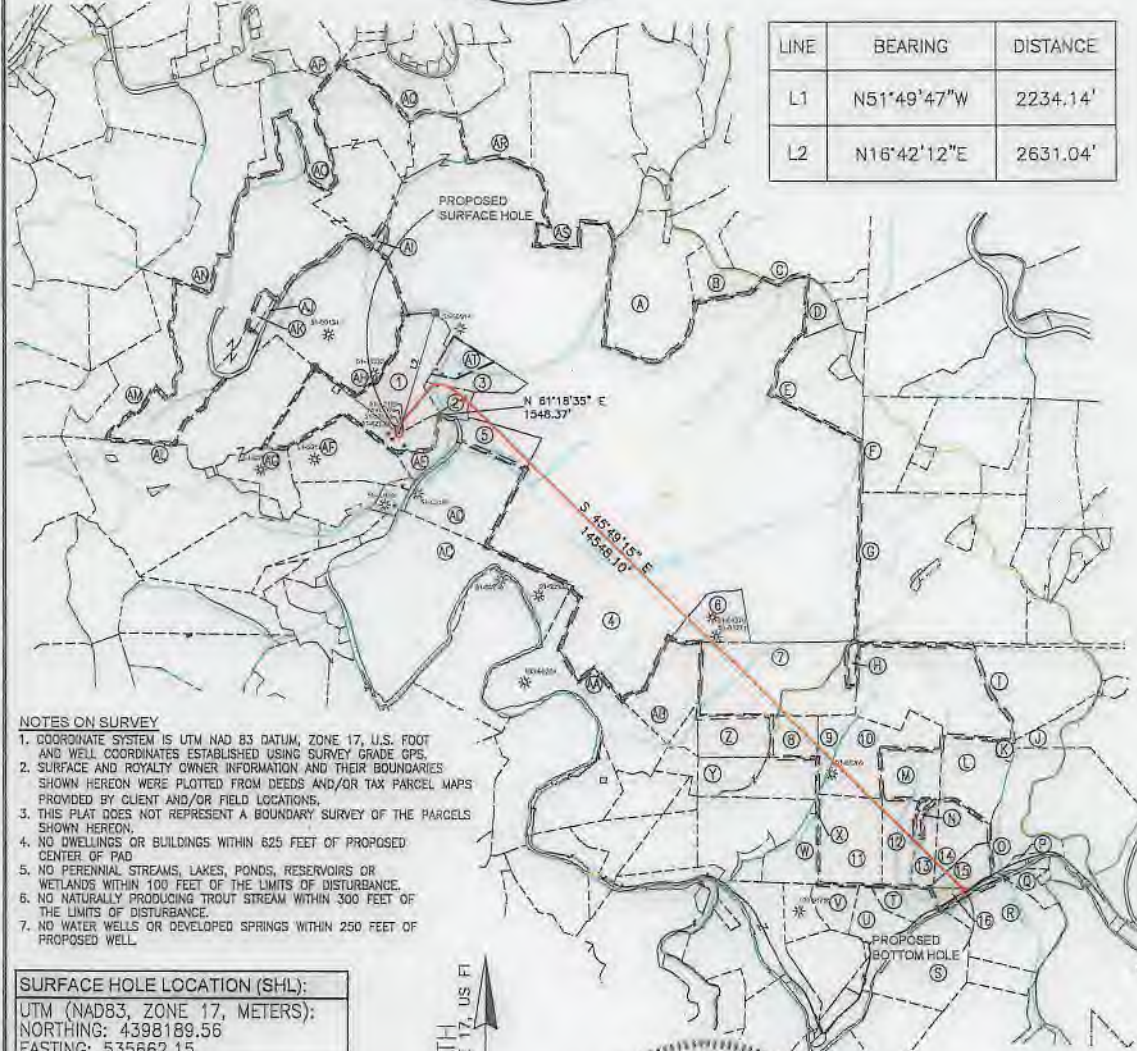


www.jhacompanies.com

68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

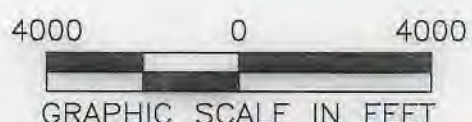


LINE	BEARING	DISTANCE
L1	N51°49'47"W	2234.14'
L2	N16°42'12"E	2631.04'



- NOTES ON SURVEY**
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 2. 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.
 3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
 5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
 7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4398189.56 EASTING: 535662.15
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4398422.93 EASTING: 536072.17
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4395387.21 EASTING: 539302.40



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.E. 19809

COMPANY: **SWN** Production Company, LLC

 WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SURVEY SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	YOCUM MSH OPERATOR'S WELL #: 210H API WELL #: 47 051 02465 STATE COUNTY PERMIT
	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"/> WATERSHED: UPPER OHIO SOUTH DISTRICT: LIBERTY COUNTY: MARSHALL SURFACE OWNER: JOSEPH LEE AND MICHAEL D. YOCUM OIL & GAS ROYALTY OWNER: JOSEPH LEE AND MICHAEL D. YOCUM 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"/> CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY) TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,305' TVD 22,257' TMD	WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
LEGEND: * PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION * EXISTING WATER WELL * EXISTING SPRING --- NATURAL WATERWAY --- SURVEYED BOUNDARY --- LEASE BOUNDARY --- PROPOSED PATH --- PUBLIC ROAD	REVISIONS: DATE: 06-09-2022 API NO: 47-051-XXXXX DRAWN BY: R. GRIMES SCALE: 1" = 4000' DRAWING NO: 2017-154 WELL LOCATION PLAT	

09/02/2022

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	YOCUM JOSEPH LEE & MICHAEL D	7-26-9
TRACT	SURFACE OWNER	TAX PARCEL
2	VELLEKOOP PETER B ET UX - TOD	7-26-6.2
3	VELLEKOOP PETER B ET UX - TOD	7-26-6.1
4	W VA WILDLIFE RESOURCES SECTION	7-24-1
5	VELLEKOOP PETER B ET UX - TOD	7-27-10.1
6	WADE MICHAEL CLAY & MCCLELLAND LAWRENCE W - TOD ET AL	7-24-6
7	ABEREGG D W EST & ABEREGG WILLIAM D ETAL L/E ABEREGG DA	1-3-2
8	WILLIAMS JOHN EDWARD	1-3-9
9	JOHNSON VERNON S EST	3-1-1
10	DRAHEIM HERBERT P ET AL	3-1-6
11	DRAHEIM GARY WAYNE JR ETAL	3-1-9
12	DRAHEIM GARY WAYNE JR ETAL	3-1-10
13	MILLIKEN KEVIN R ETAL	3-1-12
14	MILLIKEN KEVIN R ETAL	3-1-13
15	GORBY GREGORY A & CYNTHIA D	3-1-14
16	WAYNE CARMINT REALTY	3-1-18
ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	GRESHAW JASON M & MARY L	7-25-2
B	BROWN ANDREW C III	7-25-6
C	HARRINGTON CLYDE F	7-25-7
D	W VA DEPT OF COMMERCE DIV OF NATURAL RESOURCES	7-25-9
E	CONAWAY THOMAS EARL JR & CAROLYN K STOWE	7-25-12
F	CONAWAY THOMAS E	7-23-1
G	PRENDERGAST MICHAEL J & SUELLEN LEMLEY	7-23-26
H	LONG LONNY DAVID & LINDA SUE	1-3-2.1
I	PRENDERGAST MICHAEL J & SUE ELLEN	3-1-2
J	TEDROW CATHERINE A L/E TEDROW WILLIAM C II	3-2-2.1
K	WV MINERALS INC	3-1-3
L	MILLIKEN KEVIN R ETAL	3-1-4
M	DRAHEIM HERBERT P ETAL	3-1-5
N	MILLIKEN KEVIN R ETAL	3-1-11
O	MCDIFFITT WILBERT(WEBB)H TRUST	3-1-35
P	DERBY STEVEN W & REGINA D	3-1-16
Q	HIX CORA	3-2-24
R	ROBERTS LARRY D & SHARON K	3-1-33
S	MIKE ROSS INC	3-1-32
T	WAYNE CARMINT REALTY LLC	3-1-19
U	WAYNE CARMINT REALTY LLC	3-1-20
V	WAYNE CARMINT REALTY LLC	3-1-21
W	MILLIKEN KEVIN R ETAL	3-1-8
X	CBC HOLDINGS LLC	3-1-8.1
Y	WILLIAMS JOHN EDWARD	1-3-8
Z	WILLIAMS LONNIE L	1-3-7
AA	SEIDLER EARL DALE & NETTIE	1-2-6.1
AB	WILLIAMS KATHERINE E TRUST	1-3-1
AC	VELLEKOOP PETER B ET UX - TOD	7-27-13
AD	VELLEKOOP PETER B ET UX - TOD	7-27-11
AE	STIPETICH SUSAN F & FRANK R	7-27-4.2
AF	YOCUM JOSEPH LEE & MICHAEL D	7-27-4
AG	HORNER DELORSE A	7-26-10
AH	CONSOLIDATED GAS SUPPLY CORP	7-26-8
AI	BUZZARD COLIN R	7-26-3
AJ	BUTLER JOHN M & LISA A	7-26-11.1
AK	HUNDRED RESOURCES INC	7-26-11
AL	RIGGS JOHN E JR & DELANA	7-27-2
AM	MORGAN JAMES E - LIFE	7-26-14
AN	GRIFFEN M PEGGY REVOCABLE LIVING TRUST	7-19-28
AO	FROMHART BRAD ET UX - LIFE	7-20-41
AP	UNDERDONK ALAN	7-16-25.1
AQ	BURLEY AMMON ET UX	7-20-12
AR	BURLEY AMMON A	7-20-24
AS	BURLEY AMON A	7-20-37
AT	GEDEON DANIEL D ET UX	7-26-6

09/02/2022

REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN ^{REVISED}
Production Company™

OPERATOR'S YOCUM MSH
WELL #: 47-051-02465 210H

DATE: 06-09-2022
API NO: 47-051-XXXX
DRAWN BY: R. GRIMES
SCALE: N/A
DRAWING NO: 2017-154
WELL LOCATION PLAT

DISTRICT: LIBERTY COUNTY: MARSHALL STATE: WV

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

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

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

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

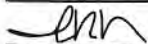
*Co-tenancy utilization - At least 7 mineral owners in tract and at least 75% of the royalty owners have consented to the lawful use or development of the oil or natural gas mineral property on the tract. The interests of the remaining co-tenants will be secured pursuant to the Co-tenancy Modernization and Majority Protection Act.

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

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

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

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

Well Operator: SWN Production Company, LLC
 By: 
 Its: Staff Landman

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Tract #	Tax Parcel	Lessor	Lessee	Royalty	BK/PG	% Interest Not Leased by SWN
1	7-26-9 p/o 7-26-9 (86.103 ac)	W.E. Franklin, Ira M. Franklin & Emma Franklin, husband and wife, John A. Franklin & Mollie Franklin, husband and wife, Mary S. Franklin, widow, M.J. Brooks & Clint Brooks, wife and husband, Edith White & J.F. White, wife and husband, and Laura Franklin, widow	L.F. Burley	13.75%	186/284	0.00%
			L.F. Burley Heirs	The Manufacturers Light and Heat Company	2/269	
			The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation	422/204	
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	642/281	
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC	662/322	
	p/o 7-26-9 (30.7 ac)	I.D. Franklin and Bessie J. Franklin, his wife The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Gas Transmission Corporation Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc.	The Manufacturers Light and Heat Company	12.50%	209/168	
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	422/204	
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC	642/281	
			Chesapeake Appalachia, LLC	Statoilhydro USA Onshore Properties Inc.	662/322	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	675/279	
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC	33/110				
2	7-26-6.2	Harold Koontz and Margaret G. Koontz The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Gas Transmission Corporation Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. Chesapeake Appalachia, LLC	The Manufacturers Light and Heat Company	12.50%	360/239	
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	422/204	
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC	642/281	
			Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.	662/322	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	675/279	
			Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC	33/110	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	33/424	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	36/422	
3	7-26-6.1	Harold Koontz and Margaret G. Koontz The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Gas Transmission Corporation Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. Chesapeake Appalachia, LLC	The Manufacturers Light and Heat Company	12.50%	360/239	
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	422/204	
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC	642/281	
			Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.	662/322	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	675/279	
			Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC	33/110	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	33/424	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	36/422	
4	7-24-1 p/o 7-24-1 Subtract 16 being 35 acres	Harold Koontz and Margaret G. Koontz The Manufacturers Light and Heat Company Columbia Gas Transmission Corporation Columbia Gas Transmission Corporation Chesapeake Appalachia, LLC Chesapeake Appalachia, LLC Statoil USA Onshore Properties Inc. Chesapeake Appalachia, LLC	The Manufacturers Light and Heat Company	12.50%	360/239	
			Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC	422/204	
			Columbia Gas Transmission Corporation	Chesapeake Appalachia, LLC	642/281	
			Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.	662/322	
			Chesapeake Appalachia, LLC	SWN Production Company, LLC	675/279	
			Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC	33/110	
	p/o 7-24-1 Subtract 22 being 128 acres	Voncile W. Baughman, a widow TH Exploration, LLC Christopher Claude Baughman, a/k/a Christopher C. Baughman, a married man dealing in his sole and separate property TH Exploration, LLC	TH Exploration, LLC	15%	878/292	
			SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.	41/299		
			TH Exploration, LLC	17%	879/320	
			SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.	41/299		
			TH Exploration, LLC	17%	879/320	
			SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.	41/299		

Harry Reid Cummings and Joyce M. Cummings, a/k/a Joyce Marie Cummings, Trustees of the Harry Reid Cummings and Joyce M. Cummings Living Trust, under Memorandum of Trust dated October 12, 2010, and recorded in Book 10 page 529 in Marshall County West Virginia	TH Exploration, LLC	15%	874/321
	SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.		41/299
TH Exploration, LLC			
Dorothy Sullivan, a/k/a Dorothy E. Sullivan, a/k/a Dorothy Elizabeth Sullivan, a widow, appearing herein by and through James Rein Sullivan, her Agent and Attorney-In-Fact, by Durable Power of Attorney dated April 27th, 1998, and unrecorded in Marshall County, West Virginia	TH Exploration, LLC	15%	876/43
	SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.		41/299
TH Exploration, LLC			
Nelson G. Baughman, III, a/k/a Nelson G. Baughman, a married man dealing in his sole and separate property	TH Exploration, LLC	15%	876/183
	SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.		41/299
TH Exploration, LLC			
Sarah C. McLaughlin, a/k/a Sarah Cummings McLaughlin and John W. McLaughlin, Co-Trustees of the Sarah C. McLaughlin Revocable Trust, under Memorandum of Trust dated October 13, 2010, and recorded in Book 10 page 525 in Marshall County West Virginia	TH Exploration, LLC	15%	873/71
	SWN Production Company, LLC and Statoil USA Onshore Properties, Inc.		41/299
TH Exploration, LLC			
p/o 7-24-1 Subtract 24 being 54.085 acres			0.00%
William D. Bonar and Gloria A. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17%	746/271
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Lee D. Bonar and Bonnie M. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17%	747/270
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Bruce D. Bonar And Sandra C. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17%	751/608
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
John Bernard Smith and Ethel Rose Smith, his wife	Chesapeake Appalachia, L.L.C.	17%	748/436
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
George Leroy Smith and Evelyn F. Smith, his wife	Chesapeake Appalachia, L.L.C.	17%	748/442
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Russell Lee Smith and Marybelle Smith, his wife	Chesapeake Appalachia, L.L.C.	17%	747/623
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Joseph W. Caseman and Gretchen V. Caseman, his wife	Chesapeake Appalachia, L.L.C.	17%	747/600
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Clyde W. Caseman and Alicia L. Caseman, his wife	Chesapeake Appalachia, L.L.C.	17%	748/401
	Statoil USA Onshore Properties, Inc.		27/50
	SWN Production Company, LLC		33/110
	SWN Exchange Titleholder LLC		33/424
Dorothy E. Wheeler, a widow	Chesapeake Appalachia, L.L.C.	17%	750/111
	Statoil USA Onshore Properties, Inc.		27/50

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Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Richard Cunliffe Edwards, a/k/a Richard Cunliff Edwards, a widower	Chesapeake Appalachia, L.L.C.	17%	775/409
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		29/90
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Donna R. Walker, a widow	Chesapeake Appalachia, L.L.C.	17%	777/475
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		29/90
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Dorothy Patterson, a single woman	Chesapeake Appalachia, L.L.C.	17%	777/481
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		29/90
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Malcolm V. Smith, Jr., a widower	Chesapeake Appalachia, L.L.C.	17%	777/487
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		29/90
Arnell Elizabeth Bowser and Glen F. Bowser, her husband	Chesapeake Appalachia, L.L.C.	17%	777/28
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		29/90
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Roberta M. Snyder, a/k/a Roberta Mary Clark, a widow	Chesapeake Appalachia, L.L.C.	17%	749/96
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Robert Clark Adams and Charlotte A. Adams, his wife	Chesapeake Appalachia, L.L.C.	17%	749/622
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
The Mary Kathryn Ray Revocable Trust, Dated December 18, 1998, by Mary Kathryn Ray, acting as Trustee	Chesapeake Appalachia, L.L.C.	17%	750/118
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Paul Charles Adams, a single man	Chesapeake Appalachia, L.L.C.	17%	750/169
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Derrick H. Adams and Suzanne Adams, his wife	Chesapeake Appalachia, L.L.C.	17%	761/395
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		28/461
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Christopher G. Adams and Erica Adams, his wife	Chesapeake Appalachia, L.L.C.	17%	761/402
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		28/461
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Sandra K. Groux and Harry W. Groux, her husband	Chesapeake Appalachia, L.L.C.	17%	748/503
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Nancy L. Rodgers, f/k/a Nancy Matthews and William I. Rodgers, her husband	Chesapeake Appalachia, L.L.C.	17%	748/527
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Charles W. Bonar And Charlotte L. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17%	755/109
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
The Estate of Richard L. Bonar, by Sandra J. Bonar, acting as Executor and Sandra J. Bonar, a widow	Chesapeake Appalachia, L.L.C.	17%	751/167
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/50
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110
Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424
Ronald E. Bonar, a single man	Chesapeake Appalachia, L.L.C.	17%	754/616
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		27/465
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110

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		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424	
		Mary T. Zito, f/k/a Mary T. Nesbitt, f/k/a Mary Bonar Nesbitt, a widow	Chesapeake Appalachia, L.L.C.	17%	764/201	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		31/246	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424	
		The Estate of John William Orr, Sr., by Linda O. Morgan, a/k/a Linda Orr Morgan, Acting As Executrix, Linda O. Morgan, a/k/a Linda Orr Morgan and Gary D. Morgan, her husband and John W. Orr, Jr., a/k/a John William Orr, Jr. And Susan J. Orr, his wife	Chesapeake Appalachia, L.L.C.	17%	768/154	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties, Inc.		28/461	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Brian Harris Bonar, Power of Attorney for Kathrine L. Bonar, widow	SWN Production Company, LLC	16%	951/337	
		Cliff Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17%	956/244	
		Cornelia C. Browne, widow	SWN Production Company, LLC	16%	955/350	
		David B. Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17%	956/248	
		David Edwards, single	SWN Production Company, LLC	0.125%	1046/565	
		McCutcheon Family, LLC	SWN Production Company, LLC	17%	957/535	
		Nelda S. Clark, widow	SWN Production Company, LLC	16%	955/243	
		Patricia Austin Meyer, married dealing in her sole and separate property	SWN Production Company, LLC	17%	957/589	
		Richard Edwards, married dealing in his sole and separate property	SWN Production Company, LLC	17%	961/213	
		Susan Dianne Clark Neidlinger, divorced	SWN Production Company, L.L.C.	18%	963/70	
		Suzanne Patrick, f/k/a Suzanne Edwards, married dealing in her sole and separate property	SWN Production Company, LLC	17%	964/66	
		Thomas Edwards, married dealing in his sole and separate property	SWN Production Company, LLC	17%	962/430	0.00%
	p/o 7-24-1 Subtract 25 being 21.3 acres	Hayhurst Company, A Florida General Partnership	Chesapeake Appalachia, L.L.C.	17%	708/66	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424	
5	7-27-10.1	Ralph W. Evans and Nellie F. Evans, his wife; Brooks B. Evans, widower	Columbia Gas Transmission Corporation	12.50%	446/121	0.00%
		Chesapeake Appalachia, LLC	Statoilhydro USA Onshore Properties Inc.		675/279	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		33/424	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		36/422	
6	7-24-6	Hayhurst Company, a Florida General Partnership	Chesapeake Appalachia, L.L.C.	17%	708/66	0.00%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		33/424	
7	1-3-2	Royalty Owner	n/a	n/a	n/a	0.52%
		Anna L. Buzzard, a single woman	Chesapeake Appalachia, L.L.C.	12.50%	90A/1	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		158A/801	
		Creta G. Kilcoyne, a widow, by her Attorney-in-Fact, Barbara J. Kilcoyne	Chesapeake Appalachia, L.L.C.	12.50%	90A/78	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		158A/801	
		Joanne R. Hobbs, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/136	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		158A/801	
		Black Bear Oil and Gas, LLC, a Limited Liability Company	Chesapeake Appalachia, L.L.C.	17%	156A/482	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		139A/506	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	

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Chesapeake Appalachia, L.L.C.	SWN Exchange Titleholder LLC		158A/801
DJK Oil & Gas Sugar Run, L.L.C.	Chesapeake Appalachia, L.L.C.	18% - Gas 1/8 - Oil	128A/659
Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		165A/673
Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		167A/9
Donna McGlone	SWN Production Company, L.L.C.	15%	186A/258
Alan R. Bradley	SWN Production Company, L.L.C.	15.00%	187A/685
Max Hinerman and Loretta Hinerman, his wife	SWN Production Company, LLC	16%	187A/687
Faye Ann Gore	SWN Production Company, LLC	16%	187A/689
Jan Rose Smallwood	SWN Production Company, LLC	16%	188A/880
Lana B. Kuhl	SWN Production Company, LLC	12.50%	188A/482
Dwight D. Hall and Patti Jo Hall, husband and wife	SWN Production Company, LLC	16%	200A/7
James L. Hall	SWN Production Company, LLC	16%	201A/572
James Smith, Jr., a single man	SWN Production Company, LLC	12.50%	199A/924
Karen Sue Measley, f/k/a Karen Sue Francis Hall and Ross Edwin Measley, Jr., her husband	SWN Production Company, LLC	16%	200A/1
Marlene Kay Musgrave and Wayne T. Musgrave, wife and husband	SWN Production Company, LLC	16%	202A/30
Patricia Wheeler Castelli a/k/a Patricia Ann Hall Wheeler a/k/a Patricia Ann Hall Smith, married, dealing in sole and separate property	SWN Production Company, LLC	12.50%	198A/155
Sue Carol Anglin, widow	SWN Production Company, LLC	16%	199A/943
Thomas G. Hall, a married man dealing in his sole and separate property	SWN Production Company, LLC	16%	199A/938
DJK Oil & Gas LLC	SWN Production Company, LLC	18%	277A/117

8	1-3-9	Royalty Owner	n/a	n/a	n/a	3.27%
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Ammon A. Burley and Flora J. Burley, his wife	SWN Production Company, LLC	17%	270A/463
Barbara Burley, single	SWN Production Company, LLC	17%	269A/554
Donald Marlin Watkins, a/k/a Marlin Watkins and Myra L. Watkins, his wife	SWN Production Company, LLC	17%	269A/598
DWG Oil and Gas Acquisitions, LLC	SWN Production Company, LLC	17%	277A/531
Karen J. Jones	SWN Production Company, LLC	17%	282A/504
Kathy J. Hoopes, f/k/a Kathy Jo Watkins, married dealing in her sole and separate property	SWN Production Company, LLC	17%	269A/304
Robert Burley, married dealing in his sole and separate property	SWN Production Company, LLC	17%	269A/298
Thomas David Conaway	SWN Production Company, LLC	17%	279A/676
Wayne Edward Burley, a/k/a Wayne E. Burley	SWN Production Company, LLC	17%	270A/447
Annette Aldine Lloyd, a/k/a Annette A. Lloyd, a widow	Chesapeake Appalachia, L.L.C.	18%	140A/542
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoilhydro USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801
SWN Production Company, LLC	Antero Resources Corporation		177A/533
Statoilhydro USA Onshore Properties Inc.	Antero Resources Corporation		177A/738
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Beulah Kathleen Mackey	Antero Resources Corporation	18%	205A/512
Antero Resources Corporation	EQT Production Company		231A/59
EQT Production Company	SWN Production Company, LLC		279A/35
Carolyn Stowe	Antero Resources Corporation	18%	209A/584
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Charles W. Geho and Sandra D. Geho, husband and wife	Antero Resources Corporation	18%	187A/933
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Dale H. Williams, a widower	Antero Resources Corporation	18%	204A/489
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Donald L. Burley, a married man dealing in his sole and separate property	Antero Resources Corporation	18%	187A/931
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Donald Scott Conaway	Antero Resources Corporation	18%	209A/444
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Edward L. Conaway	Antero Resources Corporation	18%	208A/299
Antero Resources Corporation	SWN Production Company, LLC		272A/588
Elizabeth Ann Cain, a widow	Chesapeake Appalachia, L.L.C.	18%	140A/25

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		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Franklin Thomas Barrett, a/k/a Frank Barrett, a married man dealing in his sole and separate property	Antero Resources Corporation	18%	208A/64	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Jeffrey L. Fish, a single man	Antero Resources Corporation	18%	209A/818	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Krystal K. Camp, a married woman dealing in her sole and separate property	Antero Resources Corporation	18%	207A/855	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Margery Jeanette Hale, a/k/a Marjorie Hale, a widow	Chesapeake Appalachia, L.L.C.	18%	140A/608	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Michael A. Fish, a married man dealing in his sole and separate property	Antero Resources Corporation	18%	208A/226	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Robert W. Conaway, Jr.	Antero Resources Corporation	18%	192A/132	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Ronald W. Conaway and Cindy Conaway	Antero Resources Corporation	18%	204A/841	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Rosemary Cain and Robert R. Cain, her husband	Chesapeake Appalachia, L.L.C.	18%	140A/537	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Sharon Neala Barrett Zeppernick, a married woman dealing in sole and separate property	Antero Resources Corporation	18%	208A/61	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		The First Assembly of God Church	Chesapeake Appalachia, L.L.C.	17%	140A/686	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Three Rivers Royalty	EQT Production Company	18.50%	227A/144	
		EQT Production Company	SWN Production Company, LLC		279A/35	
		Timothy N. Burley, a married man dealing in sole and separate property	Antero Resources Corporation	18%	208A/223	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
9	3-1-1	Alice Driver, f/k/a Alice LeBoda, a single woman	Chesapeake Appalachia, L.L.C.	12.50%	94A/461	0.00%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Carol Staley, f/k/a Carol Butler, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	94A/467	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Ellen Vannatter, a single woman	Chesapeake Appalachia, L.L.C.	12.50%	94A/464	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		James Denzil Stoneking, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	94A/470	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		James Joseph Aberegg, a/k/a Joseph Aberegg, a single man	Chesapeake Appalachia, L.L.C.	12.50%	94A/476	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
		Keith Aberegg, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	94A/473	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.		157A/540	
10	3-1-6	Allan Karl Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	91A/107	0.00%
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Steven Mark Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/686	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Edward Michael Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/689	
		Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Gary Wayne Draheim, Sr., a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/680	

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Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Gerald Elwood Dean, a single man	Chesapeake Appalachia, L.L.C.	12.50%	91A/104
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Louis David Williams III, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	91A/113
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Louis David Williams, Jr., a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/496
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Timothy Neil Draheim, a single man	Chesapeake Appalachia, L.L.C.	12.50%	91A/110
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Vernon Sterling Johnson, a single man	Chesapeake Appalachia, L.L.C.	12.50%	90A/579
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
William Lester Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/683
Chesapeake Appalachia, L.L.C.	Statoilhydro USA Onshore Properties Inc.		97A/578
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801

11	3-1-9	Royalty Owner	n/a	n/a	n/a	23.01%
		John J. Mensore, individually, John J. Mensore, Trustee, under the John J. Mensore Revocable Trust dated July 12, 2001, Tulane B. Mensore, and Esta Marie McCall	Antero Resources Corporation	12.50%	162A/799	
		Antero Resources Corporation	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		168A/318	
		Allen Kent Pyles, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17%	138A/146	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Beth A. Pyles, a widow	Chesapeake Appalachia, L.L.C.	17%	136A/307	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Beverly Mason, a married man dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	139A/533	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/227	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Brenda Pittman, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	140A/40	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/227	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Carol J. Buckle and Robert D. Buckle, her husband	Chesapeake Appalachia, L.L.C.	17%	138A/505	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801	
		Doris Lee Haught, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	138A/477	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285	

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Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/227
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Edwin Lee Pyles and Belinda L. Pyles, his wife	Chesapeake Appalachia, L.L.C.	17%	137A/425
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Flossie Kourey, a widow	Chesapeake Appalachia, L.L.C.	17%	137A/440
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Fonda Ruth Judge, a widow	Chesapeake Appalachia, L.L.C.	17%	140A/35
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Gary Johnson, a/k/a Gary W. Johnson, a widower	Chesapeake Appalachia, L.L.C.	17%	144A/75
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		149A/269
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
George E. Morris and Lynn M. Morris, husband and wife	EQT Production Company	15%	190A/523
EQT Production Company	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc.		279A/35
Glen O. Gilbert, a/k/a Glen Gilbert and Charlotte Y. Gilbert, his wife	Chesapeake Appalachia, L.L.C.	17%	136A/322
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Helen Margaret Downey Pile, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	140A/449
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/227
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Ivy J. Davies, a/k/a Ivy Davies and Kenneth Davies, her husband	Chesapeake Appalachia, L.L.C.	17%	143A/254
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		149A/269
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Jerry N. Morris, a single man	EQT Production Company	15%	191A/921
EQT Production Company	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc.		279A/35
Joanne E. Mason, a widow	Chesapeake Appalachia, L.L.C.	17%	136A/10
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Jona Ra Williamson and Raymond Williamson, her husband	Chesapeake Appalachia, L.L.C.	17%	137A/430
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Kevin Eugene Pyles and Martha P. Pyles, his wife	Chesapeake Appalachia, L.L.C.	17%	137A/445
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Linda Kay Gierke, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	139A/538
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/227
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Marlene H. Prosser, a/k/a Molly Prosser and David P. Prosser, her husband	Chesapeake Appalachia, L.L.C.	17%	143A/259
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		149A/269
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801

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Marlene J. Postlethwait, a/k/a Marlene Postlethwait, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	136A/312
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Martha Diana Flowers, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17%	137A/420
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Mitzi Lou Cecil, a/k/a Mitzi Lou Cecil and Floyd Cecil, her husband	Chesapeake Appalachia, L.L.C.	17%	136A/317
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Molli-B Morris, a single woman	EQT Production Company	15%	190A/521
EQT Production Company	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc.		279A/35
R.D. Morris, Jr., a/k/a Robert D. Morris, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17%	144A/460
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		157A/504
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Robert O'Neil, a/k/a Bob O'Neil, a single man	Chesapeake Appalachia, L.L.C.	17%	144A/91
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		149A/269
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Ronald O'Neil, a/k/a Ron O'Neil, a single man	Chesapeake Appalachia, L.L.C.	17%	144A/95
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		157A/504
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Shirley Ebert, a/k/a Shirley K. Ebert, a widow	Chesapeake Appalachia, L.L.C.	17%	136A/327
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Starlet R. Eiting, a single woman	EQT Production Company	15%	191A/923
EQT Production Company	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc.		279A/35
Sue Carol Davisson and William G. Davisson, her husband	Chesapeake Appalachia, L.L.C.	17%	139A/288
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		142A/228
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		143A/285
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties Inc.	SWN Exchange Titleholder LLC		158A/801
Tracy G. Matthews, married man dealing in his sole and separate property	EQT Production Company	15%	191/919
EQT Production Company	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc.		279A/35
Amy M. Thomas, married dealing in her sole and separate property	SWN Production Company, LLC	17%	285A/756
B. Kenneth Richmond, widower	SWN Production Company, LLC	17%	277A/134
Beth Ann Baker	SWN Production Company, LLC	17%	290A/149
Bradley J. Pyles, married dealing in his sole and separate property	SWN Production Company, LLC	17%	279A/710
Carla Sue Strahl, a married woman dealing in her sole and separate property	SWN Production Company, LLC	15%	189A/539
Carol E. Cain, widow	SWN Production Company, LLC	17%	278A/665
Cathy S. Pyles, single	SWN Production Company, LLC	17%	277A/500
Charles B. Strobe, a married man dealing in his sole and separate property	SWN Production Company, LLC	15%	189A/545
Darlene Braun, married dealing in her sole and separate property	SWN Production Company, LLC	17%	277A/516
Debra L. West	SWN Production Company, LLC	17%	277A/124
Donna G. Smittle and Dillon R. Smittle, her husband	SWN Production Company, LLC	17%	284A/363
Douglas P. Moats, married dealing in his sole and separate property	SWN Production Company, LLC	17%	284A/358

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Floyd P. Doty and Linda S. Doty, married couple, dealing in their sole and separate properties	SWN Production Company, LLC	18%	282A/492
Gary H. Kappel	SWN Production Company, LLC	17%	277A/129
Gary W. Strope, a married man dealing in his sole and separate property	SWN Production Company, LLC	15%	189A/543
Hubert Morris, single	SWN Production Company, LLC	17%	277A/139
Janet W. Bole, widow	SWN Production Company, LLC	17%	281A/429
Jeffrey M. Jolliff, single	SWN Production Company, LLC	17%	279A/665
Jill D. Regan, married dealing in her sole and separate property	SWN Production Company, LLC	17%	283A/412
Jill V. Lee, married dealing in her sole and separate property	SWN Production Company, LLC	17%	283A/789
John J. Yoho, married dealing in his sole and separate property	SWN Production Company, LLC	17%	292A/580
John W. Kerns Heirs Trust Under Agreement dated September 1st, 1962, by United Bank, as Successor Trustee	SWN Production Company, LLC	20%	287A/788
JPMorgan Chase Bank, N.A., Trustee of the Will E. Morris Heirs Trust	SWN Production Company, LLC	20%	292A/703
Judith C. Beltz, divorced	SWN Production Company, LLC	17%	280A/354
Judith G. Carter, married dealing in her sole and separate property	SWN Production Company, LLC	17%	280A/370
Judith L. Greer, a widow	SWN Production Company, LLC	17%	273A/860
Kathryn Pyles, single	SWN Production Company, LLC	17%	277A/511
Linda L. Oliver, widow	SWN Production Company, LLC	17%	282A/575
Margie Lucille Jolliff, widow	SWN Production Company, LLC	17%	283A/794
Mark H. Yarosz	SWN Production Company, LLC	17%	284A/348
Martha A. McConnell	SWN Production Company, LLC	17%	289A/624
Martha E. Genig, married dealing in her sole and separate property	SWN Production Company, LLC	17%	262A/764
Mary E. Mitchem, divorced	SWN Production Company, LLC	17%	284A/353
Mary L. Kemp and David B. Kemp, her husband	SWN Production Company, LLC	17%	277A/119
Morris Mountaineer Oil and Gas, LLC	SWN Production Company, LLC	20%	281A/425
Patricia Y. Warthan	SWN Production Company, LLC	17%	285A/199
Roger S. Strope, a married man dealing in his sole and separate property	SWN Production Company, LLC	15%	189A/541
Sally Lou Anderson, single	SWN Production Company, LLC	17%	277A/506
Scott A. Parsons	SWN Production Company, LLC	17%	278A/660
Suzanne B. Wallace	SWN Production Company, LLC	17%	285A/204
Suzanne D. Walls, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/343
The Sidney Austin Smith Trust, LLC	SWN Production Company, LLC	20%	281A/427
Theresa Jean Brewington, married dealing in her sole and separate property	SWN Production Company, LLC	17%	278A/670
Vicki J. Miles, married dealing in her sole and separate property	SWN Production Company, LLC	17%	280A/338
William L. Jolliff, married dealing in his sole and separate property	SWN Production Company, LLC	17%	279A/645

12	3-1-10	Royalty Owner	n/a	n/a	n/a	21.54%
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Alcinda Lou Fox Santonas, a/k/a Alcinda Lou Santonas, widow	SWN Production Company, LLC	17%	263A/305
Alice Ann Wise, single	SWN Production Company, LLC	17%	266A/6
Allan Karl Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	264A/216
Andra Emarie Gorby, single	SWN Production Company, LLC	17%	282A/549
Anita Carol Childers, widow	SWN Production Company, LLC	17%	282A/515
Barbara J. Draheim, single	SWN Production Company, LLC	17%	263A/300
Barbara Lee Garrett and Daniel R. Garrett, her husband	SWN Production Company, LLC	17%	265A/402
Benjamin F. Farrell, a single man	SWN Production Company, LLC	15%	189A/423
Bernard J. Farrell, a single man	SWN Production Company, LLC	15%	193A/115
Bernard V. Kelly, Jr., a/k/a Bernard Kelly, and Cheryl L. Kelly, his wife	SWN Production Company, LLC	17%	269A/565
Betty Jean Stanley Connelly, widow	SWN Production Company, LLC	17%	284A/431
Bruce E. Gorby and Betty Lou Gorby, his wife	SWN Production Company, LLC	17%	279A/682
Bruce R. Harmon, married dealing in her sole and separate property	SWN Production Company, LLC	17%	286A/506
Carolyn Davis Gorby, widow	SWN Production Company, LLC	17%	279A/705
Charles F. Barnard, single	SWN Production Company, LLC	17%	284A/170

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Cathy L. Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17%	281A/495
Caye Estes Everett	SWN Production Company, LLC	17%	282A/486
Church of Christ Coschocton	SWN Production Company, LLC	17%	282A/520
Charles William Baier, widower	SWN Production Company, LLC	17%	268A/69
Christopher S. Byrd, single	SWN Production Company, LLC	17%	282A/469
Catherine B. DiFlorio, married dealing in her sole and separate property	SWN Production Company, LLC	17%	283A/400
Clifford J. Thompson, Jr, married dealing in his sole and separate property	SWN Production Company, LLC	17%	283A/845
Clarita V. Bash, widow	SWN Production Company, LLC	17%	260A/543
Coschocton Foundation, an Ohio corporation not for profit	SWN Production Company, LLC	17%	279A/660
Dorothy A. Baier, widow	SWN Production Company, LLC	17%	285A/733
Daniel L. Gorby, divorced	SWN Production Company, LLC	17%	278A/198
Daniel P. Kelly, married dealing in his sole and separate property	SWN Production Company, LLC	17%	260A/525
David C. Clark	SWN Production Company, LLC	17%	281A/455
Debra L. Phillips, single	SWN Production Company, LLC	17%	279A/633
Dennis M. Connelly and Cathy L. Connelly, his wife	SWN Production Company, LLC	17%	264A/523
Dolly C. Clark, a widow	SWN Production Company, LLC	17%	280A/359
Dona L. Smith, widow	SWN Production Company, LLC	17%	261A/113
Donald K. Mason, widower	SWN Production Company, LLC	17%	261A/93
Douglas H. Arnold and Cheryl D. Arnold, his wife	SWN Production Company, LLC	17%	278A/655
Emily K. Harmon, married	SWN Production Company, LLC	16%	284A/378
Edward Michael Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	264A/206
Evelyn Denise Hall, single	SWN Production Company, LLC	17%	282A/510
Frank A. Farrell	SWN Production Company, LLC	15%	190A/413
Frank Wasler, single	SWN Production Company, LLC	16%	282A/560
G. Joan Stockton and Robert Stockton, her husband	SWN Production Company, LLC	17%	261A/841
George Steven Donaghy and Kathy Lynn Donaghy, his wife	SWN Production Company, LLC	16%	283A/851
Gail Thomas Fox and Barbara Anne Fox, his wife	SWN Production Company, LLC	17%	265A/385
Gary Wayne Draheim, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	18%	268A/16
Gary Wayne Draheim, Sr., married dealing in his sole and separate property	SWN Production Company, LLC	18%	263A/837
Gerald Elwood Dean, single	SWN Production Company, LLC	18%	264A/148
Hawley P. Harmon, married dealing in his sole and separate property	SWN Production Company, LLC	17%	284A/373
Harold R. Boyd, single	SWN Production Company, LLC	17%	281A/483
Joshua Lewis Harmon, single	SWN Production Company, LLC	17%	284A/368
Tyler Jacob Harmon, single	SWN Production Company, LLC	17%	283A/856
David W. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17%	279A/628
Dwain K. Gorby and Carol L. Gorby, his wife	SWN Production Company, LLC	17%	281A/460
Melissa Ann Gorby Butler n/k/a Melissa Ann Butler, single	SWN Production Company, LLC	17%	279A/655
James D. Fox and Lori A. Fox, his wife	SWN Production Company, LLC	17%	264A/211
Marshall H. Gorby and Rhonda L. Gorby	SWN Production Company, LLC	17%	284A/333
John D. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17%	268A/63
Janet Clark Elliott, widow	SWN Production Company, LLC	17%	292A/703
Joanne Lynn Schricker, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/413
John W. Daugherty and Mary Jane Daugherty, his wife	SWN Production Company, LLC	17%	286A/514
Joseph M. Martini, single	SWN Production Company, LLC	17%	278A/187
Julie Stocks, f/k/a Julie Marie Handy, single	SWN Production Company, LLC	17%	265A/412
Justin Dale Draheim, single	SWN Production Company, LLC	18%	263A/821
Kathleen E. Daugherty, widow	SWN Production Company, LLC	17%	269A/610
Kathleen M. Ciorra, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/419
Kathy A. Trommer, a/k/a Catherine Limbaugh, a/k/a Kathryn Limbaugh, widow	SWN Production Company, LLC	17%	269A/582
Kent E. Arnold and Mary Ann Arnold, his wife	SWN Production Company, LLC	17%	278A/203
Kevin L. Strasser, single	SWN Production Company, LLC	17%	281A/489

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Lance Edward Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	267A/462
Laura Jean Mason, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/425
Laura L. Borick, f/k/a, Laura Lee Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17%	265A/390
Linda Sue Horton-Ray	SWN Production Company, LLC	17%	285A/795
Louis David Williams, III, a married man dealing in his sole and separate property	SWN Production Company, LLC	18%	277A/521
Louis David Williams, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	18%	268A/58
Lynn Brockman Ellis, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/338
Margaret Daugherty, a widow	SWN Production Company, LLC	17%	269A/576
Marilyn Jo Alhanati, married dealing in her sole and separate property	SWN Production Company, LLC	17%	263A/816
Martha A. Frank and Ronald J. Frank, her husband	SWN Production Company, LLC	17%	264A/535
Mary Louise Gault aka Mary Lou Gault, single	SWN Production Company, LLC	17%	279A/639
Mary Snead, a/k/a Mary Louise Snead, married dealing in her sole and separate property	SWN Production Company, LLC	17%	265A/434
Mary P. Christy, f/k/a Mary P. Morris, f/k/a Mary Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17%	267A/446
Marcie Jo Naber, married dealing in her sole and separate property	SWN Production Company, LLC	17%	285A/790
Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property	SWN Production Company, LLC	17%	144A/79
Michael Ross Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	269A/560
Michael Taylor, married dealing in his sole and separate property	SWN Production Company, LLC	17%	280A/349
Michelle LeCroy, f/k/a Michelle Lee Dolin and James R. LeCroy, her husband	SWN Production Company, LLC	17%	265A/428
Mitchell Taylor, married dealing in her sole and separate property	SWN Production Company, LLC	17%	281A/434
Timothy J. Frederick and Pamela B. Frederick, a married couple	SWN Production Company, LLC	17%	280A/364
Margaret McFarland Glaser, married dealing in her sole and separate property	SWN Production Company, LLC	17%	285A/784
Patrick T. Stocks, married dealing in his sole and separate property	SWN Production Company, LLC	17%	265A/396
Marie Ann Strasser, widow	SWN Production Company, LLC	17%	282A/525
Mark Edward Strasser	SWN Production Company, LLC	17%	281A/508
Phillip Hunter Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	267A/467
Jeanne Strasser Geusz, married dealing in her sole and separate property	SWN Production Company, LLC	17%	281A/477
Melodie Rochelle, married dealing in her sole and separate property	SWN Production Company, LLC	17%	285A/745
Molly Strasser, single	SWN Production Company, LLC	17%	282A/537
Nancy J. Thompson, widow	SWN Production Company, LLC	17%	283A/833
Nancy Ruth Daugherty	SWN Production Company, LLC	17%	290A/545
Nancy Strasser Lehnhart, single	SWN Production Company, LLC	17%	283A/417
Nicholas D. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17%	281A/514
Timothy J. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17%	282A/480
Marcus E. Farrell, a married man dealing in his sole and separate property	SWN Production Company, LLC	15%	189A/427
Nancy Osborn, a single woman	SWN Production Company, LLC	15%	189A/438
Varena J. Kessel, a married woman dealing in her sole and separate property	SWN Production Company, LLC	15%	189A/322
Raymond B. Daugherty and Rheda N. Daugherty, his wife	SWN Production Company, LLC	17%	263A/315
Raymond J. Daugherty and Dianna H. Daugherty, his wife	SWN Production Company, LLC	17%	261A/835
Rex Wilburn, widower	SWN Production Company, LLC	17%	261A/819
Richard Albert Daugherty, married dealing in his sole and separate property	SWN Production Company, LLC	17%	285A/193
Richard M. Martini, single	SWN Production Company, LLC	17%	277A/909
Edward Franklin Estes, married dealing in his sole and separate property	SWN Production Company, LLC	17%	282A/570

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Robin Linn Gorby McCaskill aka Robin Lynn Gorby McCaskill and John R. McCaskill, Jr., her husband	SWN Production Company, LLC	16%	283A/429
Robin Strasser, single	SWN Production Company, LLC	17%	282A/543
Robert Michael Wayne Draheim, single	SWN Production Company, LLC	18%	266A/1
Robert W. Milliken and Sandra Milliken, his wife	SWN Production Company, LLC	17%	264A/137
Roberta A. Raymond, widow	SWN Production Company, LLC	17%	263A/489
Robyn H. MacDonald, married dealing in her sole and separate property	SWN Production Company, LLC	17%	287A/116
Roscoe Village Foundation, Inc.	SWN Production Company, LLC	17%	282A/475
Rose Ann McGillvary and Daniel R. McGillvary, her husband	SWN Production Company, LLC	17%	265A/944
Roy Howard McKinney, a married man dealing in his sole and separate property	SWN Production Company, LLC	17%	277A/144
Ruth Ann Gianni, a/k/a Ruth Kelly, and Robert Gianni, her husband	SWN Production Company, LLC	17%	268A/47
Sarah A. Lee, f/k/a Sally Stocks, and John E. Lee, her husband	SWN Production Company, LLC	17%	265A/938
Stephen D. Thompson, married dealing in his sole and separate property	SWN Production Company, LLC	17%	288A/237
Stephen Ford Whatley, Sr., married dealing in her sole and separate property	SWN Production Company, LLC	17%	286A/498
Steven Michael Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17%	263A/310
Thomas C. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17%	268A/26
Timothy Allan Draheim, single	SWN Production Company, LLC	18%	263A/842
Timothy Allan Connelly and Lori A.W. Connelly, his wife	SWN Production Company, LLC	17%	264A/529
Timothy Neil Draheim, single	SWN Production Company, LLC	17%	263A/295
Tracy Lee Howard and Mary Kathryn Howard, his wife	SWN Production Company, LLC	17%	261A/99
Thomas Leslie Kettle, Sr. widower	SWN Production Company, LLC	17%	282A/565
Thomas Summers Daugherty	SWN Production Company, LLC	17%	290A/154
Varena A. Hollingshead, single	SWN Production Company, LLC	17%	267A/472
Vernon Sterling Johnson, single	SWN Production Company, LLC	18%	269A/588
William Leonard Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	268A/21
William Lester Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18%	264A/518
Benjamin F. Farrell, a single man	Antero Resources Corporation	15%	189A/423
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Bernard J. Farrell, a single man	Antero Resources Corporation	15%	193A/115
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Frank A. Farrell	Antero Resources Corporation	15%	190A/413
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Marcus E. Farrell, a married man dealing in his sole and separate property	Antero Resources Corporation	15%	189A/427
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Nancy Osborn, a single woman	Antero Resources Corporation	15%	189A/438
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Varena J. Kessel, a married woman dealing in her sole and separate property	Antero Resources Corporation	15%	189A/322
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588
Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17%	144A/79

13	3-1-12	Royalty Owner	n/a	n/a	n/a	8.00%
		Alice Ann Wise, single	SWN Production Company, LLC	17%	266A/6	
		Benjamin F. Farrell, a single man	SWN Production Company, LLC	17%	283A/839	
		Bernard J. Farrell, single	SWN Production Company, LLC	17%	284A/443	
		Bernard V. Kelly, Jr., a/k/a Bernard Kelly, and Cheryl L. Kelly, his wife	SWN Production Company, LLC	17%	269A/565	
		Beth Ann Barnhart, a married woman dealing in her sole and separate property	SWN Production Company, LLC	17%	277A/83	
		Betty Jean Stanley Connelly, widow	SWN Production Company, LLC	17%	284A/431	
		Bryan L. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17%	277A/93	

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Cathy L. Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17%	281A/495
Charles William Baier, widower	SWN Production Company, LLC	17%	268A/69
Christopher S. Byrd, single	SWN Production Company, LLC	17%	282A/469
Cindy Adams, married dealing in her sole and separate property	SWN Production Company, LLC	17%	277A/98
Clarita V. Bash, widow	SWN Production Company, LLC	17%	264A/190
Catherine B. DiFlorio, married dealing in her sole and separate property	SWN Production Company, LLC	17%	283A/400
Clifford J. Thompson, Jr, married dealing in his sole and separate property	SWN Production Company, LLC	17%	283A/845
Stephen D. Thompson, married dealing in his sole and separate property	SWN Production Company, LLC	17%	288A/237
Daniel P. Kelly, married dealing in his sole and separate property	SWN Production Company, LLC	17%	268A/32
Debra L. Phillips, single	SWN Production Company, LLC	17%	279A/633
Debra Ann Piktel, married dealing in her sole and separate property	SWN Production Company, LLC	17%	277A/537
Dennis M. Connelly and Cathy L. Connelly, his wife	SWN Production Company, LLC	17%	264A/523
Dona L. Smith, widow	SWN Production Company, LLC	17%	264A/158
Donald K. Mason, widower	SWN Production Company, LLC	17%	268A/37
Dorothy A. Baier, widow	SWN Production Company, LLC	17%	285A/733
Eric J. Moore, single	SWN Production Company, LLC	17%	277A/526
Frank A. Farrell, married dealing in his sole and separate property	SWN Production Company, LLC	17%	285A/761
G. Joan Stockton and Robert Stockton, her husband	SWN Production Company, LLC	17%	269A/571
Gregory A. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17%	278A/182
Harold R. Boyd, single	SWN Production Company, LLC	17%	281A/483
Jeanne Strasser Geusz, married dealing in her sole and separate property	SWN Production Company, LLC	17%	281A/477
Joanne Lynn Schricker, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/413
John Allan Moore, a/k/a John A. Moore, married dealing in his sole and separate property	SWN Production Company, LLC	18%	283A/423
John D. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17%	268A/63
John W. Daugherty and Mary Jane Daugherty, his wife	SWN Production Company, LLC	17%	286A/514
Joseph M. Martini, single	SWN Production Company, LLC	17%	278A/187
Julie Stocks, f/k/a Julie Marie Handy, single	SWN Production Company, LLC	17%	265A/412
Kathleen E. Daugherty, widow	SWN Production Company, LLC	17%	269A/610
Kathleen M. Ciorra, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/419
Kathy A. Trommer, a/k/a Catherine Limbaugh, a/k/a Kathryn Lambaugh, widow	SWN Production Company, LLC	17%	269A/582
Kevin L. Strasser, single	SWN Production Company, LLC	17%	281A/489
Kevin R. Milliken, a married dealing in his sole and separate property	SWN Production Company, LLC	17%	277A/88
Laura Jean Mason, married dealing in her sole and separate property	SWN Production Company, LLC	17%	284A/425
Laura L. Borick, f/k/a, Laura Lee Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17%	265A/390
Margaret Daugherty, a widow	SWN Production Company, LLC	17%	269A/576
Margaret McFarland Glaser, married dealing in her sole and separate property	SWN Production Company, LLC	17%	285A/784
Martha A. Frank and Ronald J. Frank, her husband	SWN Production Company, LLC	17%	264A/535
Mary Louise Gault aka Mary Lou Gault, single	SWN Production Company, LLC	17%	279A/639
Mary Sneed, a/k/a Mary Louise Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17%	265A/434
Mary P. Christy, f/k/a Mary P. Morris, f/k/a Mary Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17%	267A/446
Michelle LeCroy, f/k/a Michelle Lee Dolin and James R. LeCroy, her husband	SWN Production Company, LLC	17%	265A/428
Molly Strasser, single	SWN Production Company, LLC	17%	282A/537
Mark Edward Strasser	SWN Production Company, LLC	13%	281A/508
Marie Ann Strasser, widow	SWN Production Company, LLC	17%	282A/525

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Marcus E. Farrell, a married man dealing in his sole and separate property	SWN Production Company, LLC	17%	284A/437
Nancy J. Thompson, widow	SWN Production Company, LLC	17%	283A/833
Nancy Osborn, widow	SWN Production Company, LLC	17%	281A/439
Nancy Strasser Lehnhart, single	SWN Production Company, LLC	17%	283A/417
Nancy Ruth Daugherty	SWN Production Company, LLC	17%	290A/545
Nicholas D. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17%	281A/514
Patrick T. Stocks, married dealing in his sole and separate property	SWN Production Company, LLC	17%	265A/396
Raymond B. Daugherty and Rheda N. Daugherty, his wife	SWN Production Company, LLC	17%	264A/195
Richard Albert Daughtery, married dealing in his sole and separate property	SWN Production Company, LLC	17%	285A/193
Richard M. Martini, single	SWN Production Company, LLC	17%	277A/909
Robert A. Petite, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	17%	278A/170
Robert W. Milliken and Sandra Milliken, his wife	SWN Production Company, LLC	17%	264A/137
Roberta A. Raymond, widow	SWN Production Company, LLC	17%	268A/42
Robin Strasser, single	SWN Production Company, LLC	17%	282A/543
Rose Ann McGillvary and Daniel R. McGillvary, her husband	SWN Production Company, LLC	17%	265A/944
Ruth Ann Gianni, a/k/a Ruth Kelly, and Robert Gianni, her husband	SWN Production Company, LLC	17%	268A/47
Sarah A. Lee, f/k/a Sally Stocks, and John E. Lee, her husband	SWN Production Company, LLC	17%	265A/938
Suzanne Rexroad	SWN Production Company, LLC	17%	289S/530
Thomas C. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17%	268A/26
Thomas Summers Daugherty	SWN Production Company, LLC	17%	290A/254
Timothy Allan Connelly and Lori A.W. Connelly, his wife	SWN Production Company, LLC	17%	264A/529
Timothy J. Frederick and Pamela B. Frederick, a married couple	SWN Production Company, LLC	17%	280A/364
Timothy J. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17%	282A/480
Tracy Lee Howard and Mary Kathryn Howard, his wife	SWN Production Company, LLC	17%	270A/442
Varena A. Hollingshead, single	SWN Production Company, LLC	17%	267A/472
Varena J. Farrell Kessel, single	SWN Production Company, LLC	17%	285A/772
Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17%	144A/87
Antero Resources Corporation	SWN Production Company, LLC/Equinor USA Onshore Properties, Inc		272A/588

14	3-1-13	Beth Ann Barnhart, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	108A/789	0.00%
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		117A/886	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801	
		Bryan L. Gorby and Melanie C. Gorby, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/259	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109	
		Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801	
		Cindy D. Adams and Randy G. Adams, her husband	Chesapeake Appalachia, L.L.C.	12.50%	99A/435	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109	
		Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801	
		Debra Ann Pikel, a/k/a Debra Pikel and David Stanley Pikel, her husband	Chesapeake Appalachia, L.L.C.	12.50%	100A/302	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109	
		Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801	
		Eric J. Moore, a single man	Chesapeake Appalachia, L.L.C.	12.50%	100A/573	
		Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540	
		Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109	
		Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801	
		Gregory A. Gorby, a/k/a Gregory Gorby and Cynthia D. Gorby, his wife	Chesapeake Appalachia, L.L.C.	12.50%	104A/377	

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Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
John Allan Moore, a/k/a John A. Moore and Marcia W. Moore, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/487
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Kevin R. Milliken, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	108A/568
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		117A/886
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Robert A. Petite, Jr. and Anita F. Petite, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/576
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties Inc.		120A/109
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Suzanne Rexroad, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	15.00%	108A/791
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		117A/886
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801

15	3-1-14	Royalty Owner	n/a	n/a	n/a	0.42%
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Nancy Love Melnick and Stanley Melnick, her husband	Chesapeake Appalachia, L.L.C.	17.00%	127A/381
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Kathleen E. Sabo and James J. Sabo, her husband	Chesapeake Appalachia, L.L.C.	17.00%	127A/507
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Maryann DeNooyer, a single woman	Chesapeake Appalachia, L.L.C.	17.00%	127A/598
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Thomas W. Carr, a/k/a Thomas Walter Carr and Helen L. Carr, his wife	Chesapeake Appalachia, L.L.C.	17.00%	127A/928
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Carole H. Conaway, a widow	Chesapeake Appalachia, L.L.C.	17.00%	126A/940
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Charles W. Carr and Virginia M. Carr, his wife	Chesapeake Appalachia, L.L.C.	17.00%	127A/377
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Joseph Robert Love Estate, by Diana Love, acting as Executrix and Diana Love, a widow	Chesapeake Appalachia, L.L.C.	17.00%	128A/622
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Ellen L. McMaster Conaway, a widow	Chesapeake Appalachia, L.L.C.	17.00%	127A/520
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Gregory A. Gorby and Cynthia D. Gorby, husband and wife	Chesapeake Appalachia, L.L.C.	12.50%	103A/505
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Jim Conaway and Sheryl Conaway, his wife	Chesapeake Appalachia, L.L.C.	17.00%	128A/607
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540

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Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Larry J. Conaway, Sr., a single man	Chesapeake Appalachia, L.L.C.	17.00%	126A/945
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
Michael A. Love and Candace A. Love, his wife	Chesapeake Appalachia, L.L.C.	17.00%	127A/516
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801
William J. Love and Jana S. Love, a/k/a Jana Tindle, his wife	Chesapeake Appalachia, L.L.C.	17.00%	127A/924
Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties Inc.		139A/466
Chesapeake Appalachia, LLC	SWN Production Company, LLC		157A/540
Statoil USA Onshore Properties, Inc.	SWN Exchange Titleholder		158A/801

16	3-1-18	Liberty Holding Company, Inc.	SWN Production Company, LLC	17%	261A/582	0.00%
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ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance (this "*Assignment*") is from TH Exploration, LLC, a Texas limited liability company ("*Assignor*"), to SWN PRODUCTION COMPANY, LLC, a Texas limited liability company ("*SWN*"), and EQUINOR USA ONSHORE PROPERTIES INC, a Delaware corporation ("*EQNR*" and, together with SWN, the "*Assignees*"), and is executed on July 6th, 2022 (the "*Effective Date*"). Assignor and Assignees may be referred to herein collectively as the "*Parties*," or individually as a "*Party*." Capitalized terms used herein but not otherwise defined herein (including in Section 3.7) shall have the meanings given such terms in that certain Acreage Trade Agreement between the Assignor and the Assignees dated March 25, 2022 (the "*Acreage Trade Agreement*").

ARTICLE 1 ASSIGNMENT OF ASSETS

Section 1.1 **Assignment.** For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor hereby **GRANTS, BARGAINS, ASSIGNS, CONVEYS AND TRANSFERS** unto (a) SWN an undivided 74.0000% of Assignor's right title and interest in and to and (b) EQNR an undivided 26.0000% of Assignor's right, title and interest in and to, in the case of both (a) and (b), (i) the oil and gas leases described in more detail on Exhibit A attached hereto (the "*Leases*") INsofar AND ONLY INsofar as they cover those lands described on Exhibit A (the "*Leasehold Rights*") and (ii) any surface use agreements that relate to such Leasehold Rights (collectively with the Leasehold Rights, the "*Conveyed Assets*").

TO HAVE AND TO HOLD the Conveyed Assets, together with all and singular the rights, privileges, contracts and appurtenances, in any way appertaining or belonging thereto, unto Assignees, its successors and assigns, forever, subject, to the terms and conditions of this Assignment.

Section 1.2 **Assignment Subject to Acreage Trade Agreement.** This Assignment is made in accordance with and is subject to the terms, covenants and conditions contained in that certain Acreage Trade Agreement. In the event of a conflict between the provisions of the Acreage Trade Agreement and this Assignment, the provisions of the Acreage Trade Agreement shall control. The execution and delivery of this Assignment by Assignor, and the execution and acceptance of this Assignment by Assignees, shall not operate to release or impair any surviving rights or obligations of either Party with respect to the other under the Acreage Trade Agreement.

ARTICLE 2 SPECIAL WARRANTY OF TITLE AND DISCLAIMERS

Section 2.1 **Special Warranty of Title.** Assignor hereby agrees to warrant and defend Defensible Title to the Leases unto Assignees, its successors and assigns, against every Person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Assignor or any of their respective Affiliates, but not otherwise.

Section 2.2 **Disclaimers of Warranties and Representations.**

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(a) EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN SECTION VI OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, ASSIGNOR MAKES NO, AND HEREBY EXPRESSLY DISCLAIMS, ANY REPRESENTATION OR WARRANTY, EXPRESS, IMPLIED OR STATUTORY, INCLUDING AS TO (I) TITLE TO THE LEASEHOLD RIGHTS, (II) THE CONTENTS, CHARACTER OR NATURE OF ANY DESCRIPTIVE MEMORANDUM, OR ANY REPORT OF ANY OF ITS PETROLEUM ENGINEERING CONSULTANTS, OR ANY GEOLOGICAL OR SEISMIC DATA OR INTERPRETATION, RELATING TO THE LEASEHOLD RIGHTS, (III) THE QUANTITY, QUALITY OR RECOVERABILITY OF PETROLEUM SUBSTANCES IN OR FROM THE LEASEHOLD RIGHTS, (IV) THE EXISTENCE OF ANY PROSPECT, OR ANY RECOMPLETION, INFILL OR STEP-OUT DRILLING OPPORTUNITIES, (V) ANY ESTIMATES OF THE VALUE OF THE LEASEHOLD RIGHTS, (VI) THE PRODUCTION OF PETROLEUM SUBSTANCES FROM THE LEASEHOLD RIGHTS, OR ANY PRODUCTION OR DECLINE RATES, (VII) THE MAINTENANCE, REPAIR, CONDITION, QUALITY, SUITABILITY, DESIGN OR MARKETABILITY OF THE LEASEHOLD RIGHTS, (VIII) INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT, AND (IX) ANY OTHER MATERIALS OR INFORMATION THAT MAY HAVE BEEN MADE AVAILABLE OR COMMUNICATED TO TUG HILL OR ITS AFFILIATES, OR ITS OR THEIR RESPECTIVE EMPLOYEES, AGENTS, CONSULTANTS, REPRESENTATIVES OR ADVISORS IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED BY THIS ASSIGNMENT OR ANY DISCUSSION OR PRESENTATION RELATING THERETO, AND FURTHER DISCLAIMS ANY REPRESENTATION OR WARRANTY, EXPRESS, IMPLIED, OR STATUTORY, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR CONFORMITY TO MODELS OR SAMPLES OF MATERIALS OR ANY EQUIPMENT, IT BEING EXPRESSLY UNDERSTOOD AND AGREED BY THE PARTIES THAT, EXCEPT AS EXPRESSLY REPRESENTED OTHERWISE IN SECTION VI OF THE ACREAGE TRADE AGREEMENT OR THIS ASSIGNMENT, THE LEASEHOLD RIGHTS ARE BEING TRANSFERRED BY IT "AS IS, WHERE IS," WITH ALL FAULTS AND DEFECTS.

ARTICLE 3 MISCELLANEOUS

Section 3.1 Separate Assignments. Where separate assignments of Conveyed Assets have been, or will be, executed for filing with and approval by applicable Governmental Authorities, any such separate assignments (a) shall evidence the Assignment and assignment of the applicable Conveyed Assets herein made, and shall not constitute any additional Assignment or assignment of the Conveyed Assets, (b) are not intended to modify, and shall not modify, any of the terms, covenants and conditions, or limitations on warranties, set forth in this Assignment and are not intended to create, and shall not create, any representations, warranties or additional covenants of or by Assignor to Assignees, and (c) shall be deemed to contain all of the terms and provisions of this Assignment, as fully and to all intents and purposes as though the same were set forth at length in such separate assignments.

Section 3.2 Governing Law. EXCEPT TO THE EXTENT THAT THE LAWS OF THE STATE OF WEST VIRGINIA ARE MANDATORILY APPLICABLE TO THIS ASSIGNMENT IN CONNECTION WITH THE CONVEYANCES OF PROPERTY

09/02/2022

INTERESTS INVOLVING REAL PROPERTY LOCATED IN THE STATE OF WEST VIRGINIA, THIS ASSIGNMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS ASSIGNMENT OR THE RIGHTS, DUTIES AND RELATIONSHIP OF THE PARTIES, SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, EXCLUDING ANY CONFLICTS OF LAW, RULE OR PRINCIPLE THAT MIGHT REFER CONSTRUCTION OF PROVISIONS TO THE LAWS OF ANOTHER JURISDICTION. EXCEPT AS OTHERWISE PROVIDED IN THE ACREAGE TRADE AGREEMENT, ANY DISPUTE, CONTROVERSY OR CLAIM ARISING OUT OF, RELATING TO OR IN CONNECTION WITH THIS ASSIGNMENT OR THE VALIDITY HEREOF, SHALL BE FINALLY SETTLED IN ACCORDANCE WITH SECTION XII.E. OF THE ACREAGE TRADE AGREEMENT.

Section 3.3 Successors and Assigns. This Assignment shall bind and inure to the benefit of the Parties and their respective successors and assigns; *provided, however*, that nothing in this Assignment shall assign or grant, or in any way operate to assign or grant, any right, title or interest in, to or under the Acreage Trade Agreement to any successor or assign of Assignees with respect to the Conveyed Assets or any part thereof, it being expressly understood that rights, titles and interests under the Acreage Trade Agreement may only be obtained or assigned in accordance with the terms thereof.

Section 3.4 Titles and Captions. All Article or Section titles or captions in this Assignment are for convenience only, shall not be deemed part of this Assignment and in no way define, limit, extend or describe the scope or intent of any provisions hereof. Except to the extent otherwise stated in this Assignment, references to “Articles” and “Sections” are to Articles and Sections of this Assignment, and references to “Exhibits” are to the Exhibits attached to this Assignment, which are made a part hereof and incorporated herein for all purposes.

Section 3.5 Counterparts. This Assignment may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all of such counterparts shall constitute for all purposes one agreement. Multiple counterparts of this Assignment may be recorded with federal agencies and in the counties and parishes of the states where the Conveyed Assets are located, but the inclusion of a description of any Asset in more than one counterpart of this Assignment shall not be construed as having effected any cumulative, multiple or overlapping interest in the applicable Asset. Any signature hereto delivered by a party by facsimile or other electronic transmission shall be deemed an original signature hereto.

Section 3.6 Prior Representations, Warranties and Covenants. To the extent, and only to the extent, (a) permitted by Law, (b) of any indemnity of Assignees provided to Assignor under the Acreage Trade Agreement and (c) such subrogation is not prohibited or otherwise restricted by the respective underlying instrument or agreement, Assignees shall be subrogated to Assignor’s rights in and to all representations, warranties and covenants given with respect to the Conveyed Assets. To the extent provided in the preceding sentence, Assignor hereby grants and transfers to Assignees, its successors and assigns, to the extent so transferrable and permitted by Law, the benefit of and the right to enforce all representations, warranties and covenants, if any, which Assignor is entitled to enforce with respect to the Conveyed Assets.

09/02/2022

Section 3.7 **Definitions**. When used in this Assignment, the following terms shall have the meanings specified:

“Defensible Title” means, other than Permitted Encumbrances, with respect to such title of Assignor that:

(i) entitles Assignees (in the aggregate) to the Net Acreage that is set forth on Exhibit B to the Acreage Trade Agreement for such Lease;

(ii) entitles Assignees (in the aggregate) to receive and retain from each Lease described in Exhibit B to the Acreage Trade Agreement not less than the percentage set forth on Exhibit B to the Acreage Trade Agreement as the Net Revenue Interest in such Lease; and

(iii) is free and clear of all liens (including mortgages or deeds of trust), suits, judgments, encumbrances, charges, adverse claims, burdens and defects that may adversely affect the ownership, development, operation or value of such Lease.

(Remainder of page intentionally left blank. Signatures to follow)

EXECUTED as of the date of the Parties' acknowledgments below, but effective at the Effective Date.

ASSIGNOR:

**TH EXPLORATION, LLC,
a Texas limited liability company**

David D. Kalish

By: David D. Kalish
Title: Senior Vice President - Land

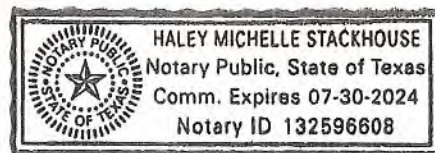
ACKNOWLEDGMENTS

STATE OF Texas
COUNTY OF Tarrant

On this, the 6th day of July, 2022, before me a Notary Public, the undersigned officer, David D. Kalish, personally appeared and acknowledged himself to be the Senior Vice President - Land of TH Exploration, LLC, and that he as such Senior Vice President - Land and being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Senior Vice President - Land.

Haley Michelle Stackhouse
Notary Public

SEAL
My commission expires: 07-30-2024



09/02/2022

INTERESTS INVOLVING REAL PROPERTY LOCATED IN THE STATE OF WEST VIRGINIA, THIS ASSIGNMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS ASSIGNMENT OR THE RIGHTS, DUTIES AND RELATIONSHIP OF THE PARTIES, SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS, EXCLUDING ANY CONFLICTS OF LAW, RULE OR PRINCIPLE THAT MIGHT REFER CONSTRUCTION OF PROVISIONS TO THE LAWS OF ANOTHER JURISDICTION. EXCEPT AS OTHERWISE PROVIDED IN THE ACREAGE TRADE AGREEMENT, ANY DISPUTE, CONTROVERSY OR CLAIM ARISING OUT OF, RELATING TO OR IN CONNECTION WITH THIS ASSIGNMENT OR THE VALIDITY HEREOF, SHALL BE FINALLY SETTLED IN ACCORDANCE WITH SECTION XII.E. OF THE ACREAGE TRADE AGREEMENT.

Section 3.3 Successors and Assigns. This Assignment shall bind and inure to the benefit of the Parties and their respective successors and assigns; *provided, however*, that nothing in this Assignment shall assign or grant, or in any way operate to assign or grant, any right, title or interest in, to or under the Acreage Trade Agreement to any successor or assign of Assignees with respect to the Conveyed Assets or any part thereof, it being expressly understood that rights, titles and interests under the Acreage Trade Agreement may only be obtained or assigned in accordance with the terms thereof.

Section 3.4 Titles and Captions. All Article or Section titles or captions in this Assignment are for convenience only, shall not be deemed part of this Assignment and in no way define, limit, extend or describe the scope or intent of any provisions hereof. Except to the extent otherwise stated in this Assignment, references to “Articles” and “Sections” are to Articles and Sections of this Assignment, and references to “Exhibits” are to the Exhibits attached to this Assignment, which are made a part hereof and incorporated herein for all purposes.

Section 3.5 Counterparts. This Assignment may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all of such counterparts shall constitute for all purposes one agreement. Multiple counterparts of this Assignment may be recorded with federal agencies and in the counties and parishes of the states where the Conveyed Assets are located, but the inclusion of a description of any Asset in more than one counterpart of this Assignment shall not be construed as having effected any cumulative, multiple or overlapping interest in the applicable Asset. Any signature hereto delivered by a party by facsimile or other electronic transmission shall be deemed an original signature hereto.

Section 3.6 Prior Representations, Warranties and Covenants. To the extent, and only to the extent, (a) permitted by Law, (b) of any indemnity of Assignees provided to Assignor under the Acreage Trade Agreement and (c) such subrogation is not prohibited or otherwise restricted by the respective underlying instrument or agreement, Assignees shall be subrogated to Assignor’s rights in and to all representations, warranties and covenants given with respect to the Conveyed Assets. To the extent provided in the preceding sentence, Assignor hereby grants and transfers to Assignees, its successors and assigns, to the extent so transferrable and permitted by Law, the benefit of and the right to enforce all representations, warranties and covenants, if any, which Assignor is entitled to enforce with respect to the Conveyed Assets.

09/02/2022

Section 3.7 **Definitions**. When used in this Assignment, the following terms shall have the meanings specified:

“Defensible Title” means, other than Permitted Encumbrances, with respect to such title of Assignor that:

(i) entitles Assignees (in the aggregate) to the Net Acreage that is set forth on Exhibit B to the Acreage Trade Agreement for such Lease;

(ii) entitles Assignees (in the aggregate) to receive and retain from each Lease described in Exhibit B to the Acreage Trade Agreement not less than the percentage set forth on Exhibit B to the Acreage Trade Agreement as the Net Revenue Interest in such Lease; and

(iii) is free and clear of all liens (including mortgages or deeds of trust), suits, judgments, encumbrances, charges, adverse claims, burdens and defects that may adversely affect the ownership, development, operation or value of such Lease.

(Remainder of page intentionally left blank. Signatures to follow)

EXECUTED as of the date of the Parties' acknowledgments below, but effective at the Effective Date.

ASSIGNOR:

**TH EXPLORATION, LLC,
a Texas limited liability company**

David D. Kalish

By: David D. Kalish
Title: Senior Vice President - Land

ACKNOWLEDGMENTS

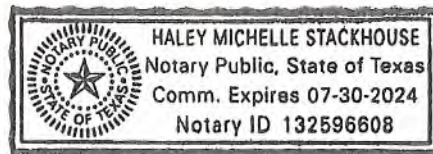
STATE OF Texas
COUNTY OF Tarrant

On this, the 6th day of July, 2022, before me a Notary Public, the undersigned officer, David D. Kalish, personally appeared and acknowledged himself to be the Senior Vice President - Land of TH Exploration, LLC, and that he as such Senior Vice President - Land and being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Senior Vice President - Land.

Haley Michelle Stackhouse

Notary Public

SEAL
My commission expires: 07-30-2024



ASSIGNEES:

SWN PRODUCTION COMPANY, LLC
a Texas limited liability company

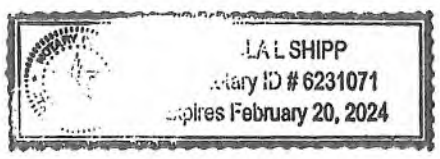
By: PTK
Name: PAUL M BACHO
Title: LAND MANAGER

PTK

ACKNOWLEDGMENTS

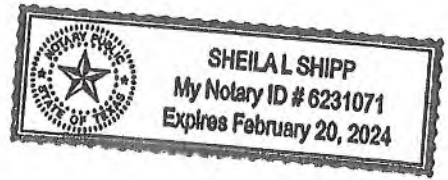
STATE OF TEXAS
COUNTY OF HARRIS

On this, the 11th day of July, 2022, before me a Notary Public, the undersigned officer, PAUL M. BACHO, personally appeared and acknowledged himself to be the LAND MANAGER of SWN PRODUCTION COMPANY, LLC, a Texas limited liability company, and that he as such LAND MANAGER and being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Land Manager.



Sheila L. Shipp
Notary Public

SEAL
My commission expires: 2/20/2024



ASSIGNEES

**EQUINOR USA ONSHORE PROPERTIES INC,
a Delaware corporation**

By: _____
Name: _____
Title: _____

ACKNOWLEDGMENTS

STATE OF _____
COUNTY OF _____

On this, the ____ day of _____, 2022, before me a Notary Public, the undersigned officer, _____, personally appeared and acknowledged himself to be the _____ of _____, a _____, and that he as such _____ and being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as _____.

Notary Public

SEAL
My commission expires: _____

09/02/2022

Exhibit "A"
Leases - TH Exploration, LLC to SWN and EQNR

Attached to and made a part of that certain Assignment and Conveyance, effective July 6th 2022 by and between TH Exploration, LLC and SWN Production Company, LLC and Equinor USA Onshore Properties Inc.

TH Lease Number	Lessor	Lessee	Effective Date	County	District	BK - PG	Gross Acres	Tax Parcel Number	Partial Assignment	Conveyed Parcels	Retained Parcels	Conveyed Depths
10*40410	DELORSE A HORNER, WIDOW	TH EXPLORATION, LLC	03/03/2022	Wetzel	Clay	285A - 65	7.500000	3-1-7	No	3-1-7		ALL

July 14, 2022

Mr. Charles Brewer
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

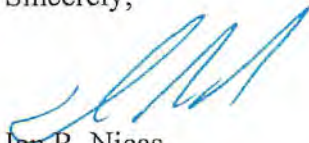
RE: SWN's proposed New Well: Yocum MSH 210H in Marshall County, West Virginia, Drilling under Amos Hollow Road, Rice Ridge Road, and Low Gap Run Road.

Dear Mr Brewer:

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 Amos Hollow Road, Rice Ridge Road, and Low Gap Run Road. 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,



Ian R. Nicas
Staff Landman
SWN Production Company, LLC

RECEIVED
Office of Oil and Gas

JUL 20 2022

WV Department of
Environmental Protection



09/02/2022

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

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

Date of Notice Certification: 7/19

API No. 47- 009 - _____
Operator's Well No. Yocum MSH 210H
Well Pad Name: Yocum MSH

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>535662.15</u>
County: <u>051-Marshall</u>		Northing: <u>4398189.56</u>
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Road</u>	
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Yocum</u>	
Watershed: <u>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.

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

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.

Office of Oil and Gas

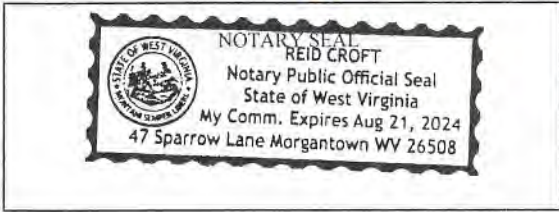
JUL 20 2022

Certification of Notice is hereby given:

THEREFORE, I Brittany Woody, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>SWN Production Co., LLC</u>	Address:	<u>1300 Fort Pierpont Dr., Suite 201</u>
By:	<u>Brittany Woody</u>		<u>Morgantown, WV 26508</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u></u>
Telephone:	<u>304-884-1610</u>	Email:	<u>Brittany_Woody@swn.com</u>

Brittany Woody



Subscribed and sworn before me this 1st day of June, 2022.

Reid Croft Notary Public

My Commission Expires 8/21/2024

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas
JUL 20 2022
WV Department of
Environmental Protection

09/02/2022

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

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

Date of Notice: 7/19 Date Permit Application Filed: 7/19

Notice of:

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

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

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

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

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

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

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

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

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

COAL OPERATOR
 Name: _____
 Address: _____

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

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

RECEIVED

*Please attach additional copies of this and Gas

JUL 20 2022

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

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

Date of Notice: 7/19 Date Permit Application Filed: 7/19

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: Susan and Frank Stipetich
 Address: 310 3rd Street
Glen Dale, WV 26038
 Name: Phillip D. High
 Address: 37 Aaronwoods Court
Wheeling, WV 26003

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

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

COAL OWNER OR LESSEE
 Name: Consol Energy
 Address: 257 Technology Drive Suite 101
Canonsburg, PA 15317-6506
 COAL OPERATOR
 Name: _____
 Address: _____

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

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

*Please attach additional forms if necessary

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 Office of Oil and Gas
 JUL 20 2022
 WV Department of
 Environmental Protection

09/02/2022

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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09/02/2022

WW-6A
(8-13)

API NO. 47- 009 -
OPERATOR WELL NO. Yocum MSH 210H
Well Pad Name: Yocum MSH

Notice is hereby given by:

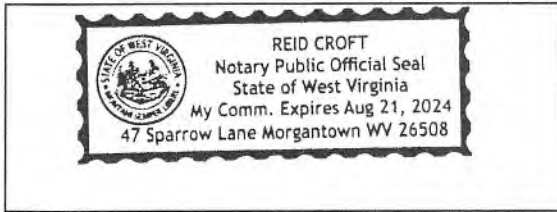
Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

Brittany Woody

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Facsimile: _____

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 1st day of June, 2022.

Reid Croft Notary Public

My Commission Expires 8/21/2024

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JUL 20 2022
WV Department of
Environmental Protection

09/02/2022

OWNERNAME	ADDRESS	CITY/STATE/ZIP	PARCEL ID	WaterSources
GEDEON DANIEL D ET UX	6740 PARK RD	LEAVITTSBURG, OH 44430	07 26000600000000	2
VELLEKOOP PETER ET UX	220 CRYSTAL COVE RD	WALDOBORO, ME 04572	07 26000600020000	4
YOCUM MICHAEL DAVID ET AL	2001 4TH ST	MOUNDSVILLE, WV 26041	07 27000400010000	1
HIGH PHILIP D	37 AARON WOODS CT	WHEELING, WV 26003	07 27000800000000	1

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JUL 20 2022
WV Department of
Environmental Protection

09/02/2022

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: 5/18/22 **Date of Planned Entry:** 5/25/22

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

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

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

Name: Susan and Frank Stipetich
Address: 310 3rd Street
Glen Dale, WV 26038

COAL OWNER OR LESSEE

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

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MINERAL OWNER(s)

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

*please attach additional forms if necessary

Notice is hereby given:

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

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

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

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

Notice is hereby given by:

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

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Facsimile: _____

Oil and Gas Privacy Notice:

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

09/02/2022

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

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

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 METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

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Notice is hereby provided to:

SURFACE OWNER(s)

Name: Phillip D. High

Address: 37 Aaronwoods Court
Wheeling, WV 26003

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Consol Energy Attn: Casey Saunders

Address: 275 Technology Drive., Suite 101
Canonsburg, PA 15317-9565

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MINERAL OWNER(s)

Name: Karen Sue Franklin Marshall

Address: 1722 Rock Road
Chambersburg, PA 17202

WV Department of Environmental Protection

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia

County: Marshall

District: Liberty

Quadrangle: Littleton

Approx. Latitude & Longitude: 39.732795, -80.583668

Public Road Access: Amos Hollow Road

Watershed: West Virginia Fork Fish Creek

Generally used farm name: Yocum

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC

Telephone: 304-884-1610

Email: brittany_woody@swn.com

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508

Facsimile: _____

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09/02/2022

**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: 5/18/2022 **Date of Planned Entry:** 5/25/2022

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

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

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Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

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MINERAL OWNER(s)

Name: Thomas Elwood Franklin
Address: 43 Ridgeway Drive
Mechanicburg, PA 17050

JUL 20 2022
WV Department of
Environmental Protection

*please attach additional forms if necessary

Notice is hereby given:

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

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

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

Notice is hereby given by:

Well Operator: <u>SWN PRODUCTION COMPANY, LLC</u>	Address: <u>1300 Fort Pierpont Dr., Suite 201</u>
Telephone: <u>304-884-1610</u>	<u>Morgantown, WV 26508</u>
Email: <u>brittany_woody@swn.com</u>	Facsimile: _____

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09/02/2022

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: 5/18/2022 **Date of Planned Entry:** 5/25/2022

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

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

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Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____

Address: _____

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: _____

Address: _____

MINERAL OWNER(s)

Name: Three Rivers Royalty II, LLC

Address: 3055 E. Mineral Circle, Suite 101
Centennial, CO 80112

*please attach additional forms if necessary

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Office of Oil and Gas

JUL 20 2022

WV Department of
Environmental Protection

Notice is hereby given:

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Watershed: West Virginia Fork Fish Creek

Generally used farm name: Yocum

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC

Telephone: 304-884-1610

Email: brittany_woody@swn.com

Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508

Facsimile: _____

Oil and Gas Privacy Notice:

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

09/02/2022

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: 06/01/2022 **Date Permit Application Filed:** 7/19

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: Susan and Frank Stipetich
Address: 310 3rd Street
Glen Dale, WV 26083

Name: _____
Address: _____
JUL 20 2022

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Office of Oil and Gas

WV Department of
Environmental Protection

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83 Easting:	<u>535,662.15</u>
County:	<u>Marshall</u>	UTM NAD 83 Northing:	<u>4,398,189.56</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>
Watershed:	<u>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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

Authorized Representative: Justin Booth
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

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

Date of Notice: 06/01/2022 **Date Permit Application Filed:** 7/19

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

HAND DELIVERY **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

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

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

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

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,662.15</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,189.56</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

Authorized Representative: Justin Booth
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

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

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

Date of Notice: 06/01/2022 **Date Permit Application Filed:** MM

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

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

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>535,662.15</u>
County:	<u>Marshall</u>		Northing:	<u>4,398,189.56</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Amos Hollow Rd.</u>	
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:	<u>Yocum MSH</u>	
Watershed:	<u>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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

Authorized Representative: Justin Booth
Address: 1300 Fort Pierpont Drive, Suite 201
Morgantown, WV 26508
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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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: 06/01/2022 **Date Permit Application Filed:** 1/19

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: <u>Philip D. High</u>	Name: _____
Address: <u>37 Aaronwoods Court</u> <u>Wheeling, WV 26003</u>	Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>535,662.15</u>	
County: <u>Marshall</u>		Northing: <u>4,398,189.56</u>	
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Rd.</u>		
Quadrangle: <u>Littleton, WV</u>	Generally used farm name: <u>Yocum MSH</u>		
Watershed: <u>Upper Ohio South</u>			

This Notice Shall Include:

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

Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>1300 Fort Pierpont Drive, Suite 201</u>
Telephone: <u>304-884-1675</u>	<u>Morgantown, WV 26508</u>
Email: <u>Justin_Booth@swn.com</u>	Facsimile: <u>304-884-1675</u>

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Environmental Protection

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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: 06/01/2022 **Date Permit Application Filed:** _____

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

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RETURN RECEIPT REQUESTED DELIVERY

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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: <u>Michael D. Yocum</u>	Name: _____
Address: <u>2001 4th Street</u>	Address: _____
<u>Moundsville, WV 26041</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:

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>535,662.15</u>
County: <u>Marshall</u>		Northing: <u>4,398,189.56</u>
District: <u>Liberty</u>	Public Road Access: <u>Amos Hollow Rd.</u>	
Quadrangle: <u>Littleton, WV</u>	Generally used farm name: <u>Yocum MSH</u>	
Watershed: <u>Upper Ohio South</u>		

This Notice Shall Include:

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

Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>1300 Fort Pierpont Drive, Suite 201</u>
Telephone: <u>304-884-1675</u>	<u>Morgantown, WV 26508</u>
Email: <u>Justin_Booth@swn.com</u>	Facsimile: <u>304-884-1675</u>

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WV Department of
Environmental Protection

09/02/2022



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

D. Alan Reed, P.E.
State Highway Engineer

Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

May 31, 2022

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

Subject: DOH Permit for the Yocum Pad, Marshall County
Yocum MSH 210H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2018-0157 which has been issued to Southwestern Energy for access to the State Road for a well site located off Marshall County Route 89 SLS MP 2.15.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

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

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Office of Oil and Gas

JUL 20 2022

WV Department of
Environmental Protection

Attachment VI Frac Additives

Product Name	Product Use	Chemical Name	CAS Number
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
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
CarboNRT	Tracer	Ceramic Proppant	66402-68-4
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
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
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary
		Hydrotreated light petroleum distillate	64742-47-8
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
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Plexslick 930	Friction Reducer	Copolymer of 2-propenamide	Proprietary
		Hydrotreated Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Alcohols, C12-16, Exoxylated	68551-12-2
		Oleic Acid Diethanolamide	93-83-4
		Ammonium Chloride	12125-02-9
Plexslick 953	Friction Reducer	Petroleum Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Ammonium Chloride	12125-02-9
		N,N-bis (2-hydroxyethyl) oleamide	93-83-4
Plexslick 957	Friction Reducer	Petroleum Distillate	64742-47-8
		Ammonium Chloride	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Alcohols, C12-16, Exoxylated	68551-12-2
		Water	7732-15-5
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06-9
Plexaid 655 NM	Scale Inhibitor	Diethylenetriamine penta (methylene phosphonic acid)	15827-30-8
Plexslick 922	no data available	Copolymer of 2-propenamide	69418-26-4
		Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium chloride ((NH4)Cl)	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
Tolcide PS50A	Biocidal product	Tetrakis (hydroxymethyl) phosphonium sulphate	55566-30-8
		Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate groups	397256-50-7
LD-2950	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Ethoxylated alcohol	Proprietary
Legend LD-7750W	Scale Control	Poly (oxy-1,2-ethanediy)l alpha.-tridecyl-.omega.-hydroxy-, branched	69011-36-5
		Methanol	67-56-1
		Phosphonic Acid Salt	Proprietary
MC MX 8-4743	Specialty Product	Sodium Nitrate	7631-99-4

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JUL 20 2022
WV Department of
Environmental Protection

AS-BUILT PLANS FOR YOCUM WELL PAD AND ACCESS ROAD LIBERTY DISTRICT, MARSHALL COUNTY, WV FEBRUARY 2019

MARSHALL COUNTY, WV HIGHWAY MAP



LITTLETON, WV QUAD MAP



ONE CALL UTILITY SYSTEM CONTACT INFO



CONTRACTOR SHALL NOTIFY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION OR DEMOLITION NOT LESS THAN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL FEDERAL OR STATE HOLIDAYS, NOR MORE THAN TEN (10) WORK DAYS PRIOR TO THE BEGINNING OF SUCH WORK.

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TOPHOLE COORDINATES

Well Number	WV83-N Latitude	WV83-N Longitude	UTM 83-17 Northing	UTM 83-17 Easting
205H	N 39.732964°	W 80.583491°	14429769.221 ft	1757533.640 ft
3H	N 39.732946°	W 80.583518°	14429762.705 ft	1757506.040 ft
3H	N 39.732829°	W 80.583545°	14429756.190 ft	1757498.460 ft
3H	N 39.732911°	W 80.583572°	14429749.720 ft	1757490.871 ft
SLOT 5	N 39.732893°	W 80.583600°	14429743.188 ft	1757483.283 ft
SLOT 6	N 39.732875°	W 80.583627°	14429736.678 ft	1757475.694 ft
SLOT 7	N 39.732857°	W 80.583654°	14429730.173 ft	1757468.105 ft
SLOT 8	N 39.732940°	W 80.583681°	14429723.667 ft	1757460.516 ft
SLOT 9	N 39.732822°	W 80.583708°	14429717.157 ft	1757452.928 ft
SLOT 10	N 39.732804°	W 80.583735°	14429710.651 ft	1757445.339 ft
SLOT 11	N 39.732786°	W 80.583762°	14429704.145 ft	1757437.750 ft
SLOT 12	N 39.732769°	W 80.583789°	14429697.636 ft	1757430.161 ft
SLOT 13	N 39.732751°	W 80.583816°	14429691.130 ft	1757422.572 ft
SLOT 14	N 39.732733°	W 80.583843°	14429684.620 ft	1757414.983 ft
SLOT 15	N 39.732715°	W 80.583871°	14429678.115 ft	1757407.394 ft
SLOT 16	N 39.732697°	W 80.583898°	14429671.607 ft	1757399.805 ft
SLOT 17	N 39.732748°	W 80.583953°	14429665.100 ft	1757392.216 ft
SLOT 18	N 39.732765°	W 80.583926°	14429658.592 ft	1757384.627 ft
SLOT 19	N 39.732783°	W 80.583899°	14429652.085 ft	1757377.038 ft
SLOT 20	N 39.732801°	W 80.583872°	14429645.577 ft	1757405.954 ft
SLOT 21	N 39.732819°	W 80.583845°	14429639.070 ft	1757414.870 ft
SLOT 22	N 39.732837°	W 80.583818°	14429632.562 ft	1757423.786 ft
SLOT 23	N 39.732854°	W 80.583791°	14429626.055 ft	1757432.702 ft
SLOT 24	N 39.732872°	W 80.583764°	14429619.547 ft	1757441.618 ft
SLOT 25	N 39.732890°	W 80.583737°	14429613.040 ft	1757450.534 ft
SLOT 26	N 39.732908°	W 80.583710°	14429606.532 ft	1757459.450 ft
SLOT 27	N 39.732925°	W 80.583683°	14429600.025 ft	1757468.366 ft
SLOT 28	N 39.732943°	W 80.583656°	14429593.517 ft	1757477.282 ft
SLOT 29	N 39.732961°	W 80.583629°	14429587.010 ft	1757486.198 ft
SLOT 30	N 39.732979°	W 80.583602°	14429580.502 ft	1757495.114 ft
SLOT 31	N 39.732997°	W 80.583575°	14429574.000 ft	1757504.030 ft
SLOT 32	N 39.733014°	W 80.583548°	14429567.492 ft	1757512.946 ft

DISTURBANCE SUMMARY

Property Owner (Tax Map / Parcel)	Access Road Disturbance	Well Pad Disturbance	Total Disturbance
Yocum Joseph Lee & Michael D (25-2-26-8)	2.94	16.97	19.91
Yocum Joseph Lee & Michael D (25-2-27-4)	7.66	0.00	7.66
Yocum Joseph Lee & Michael D (25-2-27-5)	0.25	0.00	0.25
High P&Tip D (25-2-27-8)	0.11	0.00	0.11
Total Disturbance	10.96	16.97	27.93

SITE COORDINATES

Coordinate Label	Well Pad Center	Access Road Beginning	AST Center
WV83-N Latitude	N 39.732854°	N 39.729937°	N 39.731899°
WV83-N Longitude	W 80.583723°	W 80.584823°	W 80.583613°
WV83-N Northing	450881.231 ft	449822.466 ft	451268.067 ft
WV83-N Easting	1663725.923 ft	1663603.445 ft	1663199.092 ft
UTM 83-17 Northing	14429728.998 ft	14428665.345 ft	14430106.876 ft
UTM 83-17 Easting	1757448.620 ft	1757144.214 ft	1756915.538 ft
UTM 83-17 Northing	4398190.195 m	4397865.993 m	4398305.172 m
UTM 83-17 Easting	535671.411 m	5355784.828 m	535508.927 m

WELLS

WELL NAME	API NUMBER	CELLAR DIAMETER	CELLAR DEPTH	CELLAR MATERIAL
PERMITTED YOCUM MSH 5H	051-02024	10"	10'	CELLAR TCOH
PERMITTED YOCUM MSH 3H	051-03124	10"	10'	CELLAR TCOH
PERMITTED YOCUM MSH 209H	051-02135	10"	10'	CELLAR TCOH
PERMITTED YOCUM MSH 1H	051-02133	10"	10'	CELLAR TCOH

DRIVING DIRECTIONS FROM CAMERON, WV

1. HEAD SOUTH ON WILEY (361-FT)
2. TURN LEFT ONTO US-250 N / MAPLE AVE (8.4-mi)
3. TURN RIGHT ONTO AMES HOLLOW RD (2.0-mi)
4. DESTINATION WILL BE ON THE RIGHT.

SHEET INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2-3	EVACUATION PLAN & PREVAILING WIND
4	AS-BUILT OVERALL SITE PLAN
5-8	AS-BUILT ACCESS ROAD PLAN & PROFILE
9	AS-BUILT WELL PAD PLAN
10	AS-BUILT WELL PAD SECTIONS
R1	SLIP REPAIR OVERALL
R2	SLIP REPAIR SITE PLAN
R3	AST PLAN
R4	AST PAD SECTIONS
R5-R14	ACCESS ROAD SECTIONS
R15	AST AR PROFILE
D1-D6	DETAILS
D7-D8	GENERAL NOTES

I hereby certify that I am a licensed engineer in the state of West Virginia. This As-Built certifies, to the best of my knowledge, information and belief, the Well Pad constructed by Burns Drilling & Excavation, in Marshall County, WV on behalf of SWN Production Company, LLC, has been constructed in general conformance to the plans and specification and, in my professional opinion, is in compliance with applicable laws, codes, and ordinances.

**APPROVED
MODIFICATION
WVDEP 006**

WAS 10/7/2019

- APPROVED FOR PERMITS DATE: 2/19/18 BY: RBM
- APPROVED FOR BIDS DATE: 5/16/18 BY: RBM
- APPROVED FOR CONSTRUCTION DATE: 8/6/18 BY: RBM

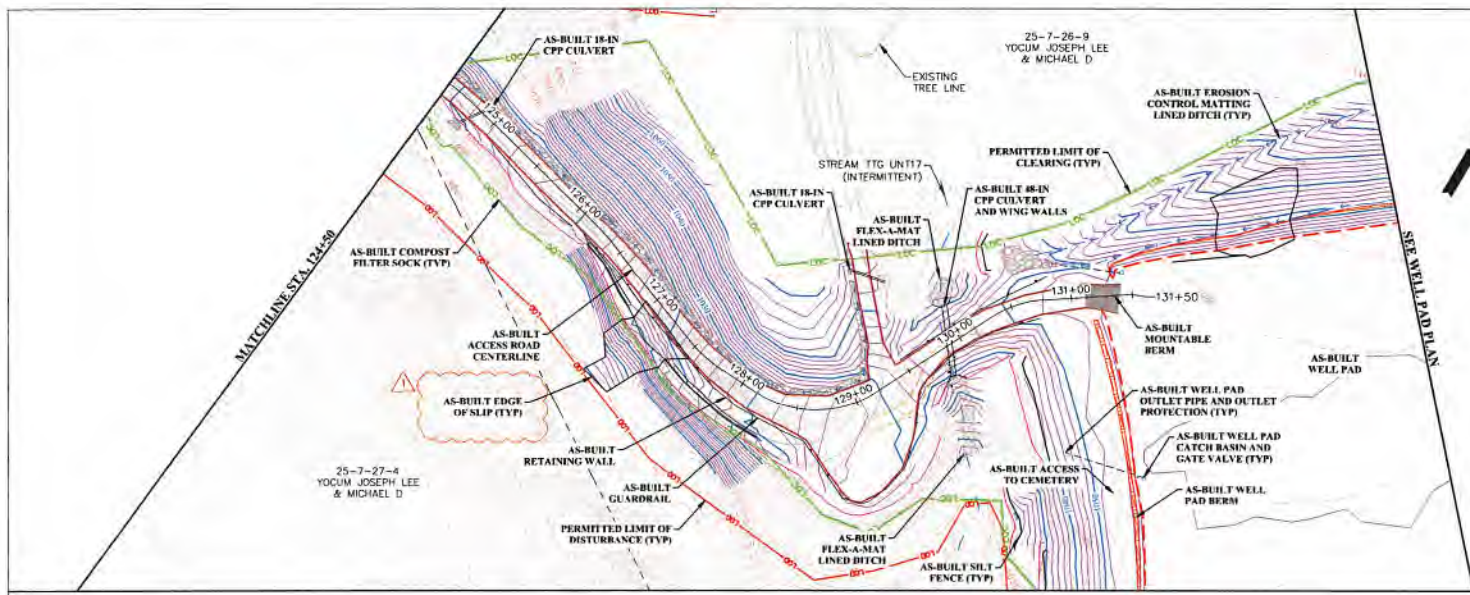
REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	1, 4, 6, R1-R3 & D1-D7	JCA & JRP	09/19/19	ADDED SLIP REPAIR PLANS & DETAILS
2	R1-R3, R15 & D7-D8	JCA	09/25/19	REVISED PER DEP COMMENTS



OPERATOR
SWN PRODUCTION COMPANY, LLC
178 Innovation Drive
Jane Lew, WV 26138
(304) 884-1610



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PLAN LEGEND

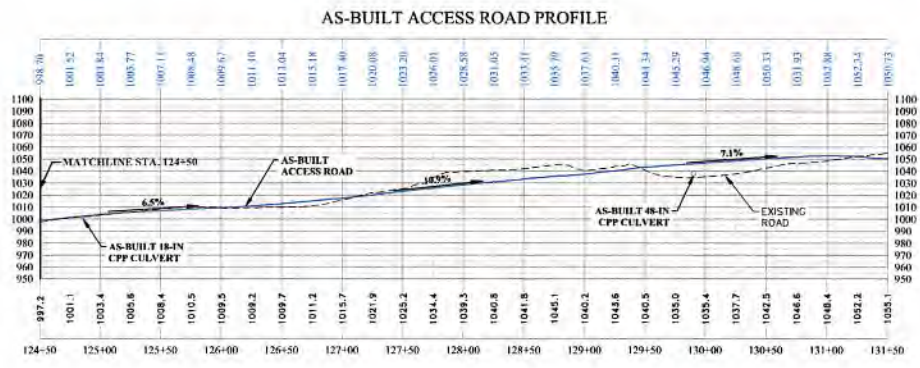
	EXISTING CONTOURS
	PERMITTED LIMIT OF DISTURBANCE
	AS-BUILT SURVEY CONTOURS
	AS-BUILT SURVEY WELL PAD BERM
	AS-BUILT SURVEY EDGE OF PAD
	AS-BUILT SURVEY EDGE OF ROAD
	AS-BUILT SURVEY EDGE OF TOPSOIL STOCKPILE
	AS-BUILT SURVEY VEGETATED DITCH
	AS-BUILT SURVEY ROCK LINED DITCH
	AS-BUILT SURVEY CULVERT
	AS-BUILT SURVEY COMPOST FILTER SOCK
	AS-BUILT SURVEY SILT FENCE

- NOTES**
- EXISTING FEATURES AND CONTOURS ARE BASED ON AERIAL MAPPING PROVIDED BY HILL MOUNTAIN, INC IN FEBRUARY 2017. MAPPING WAS ESTABLISHED FROM ORTHOGRAPHIC PHOTOGRAPHY TAKEN ON 26 MARCH 2016.
 - PROJECT DATUM IS NAD-83 DATUM, WEST VIRGINIA STATE PLAINS, NORTH ZONE, US FOOT, CENTRAL MERIDIAN 81D W.
 - AS-BUILT SURVEY PERFORMED BY THRASHER IN JANUARY 2019.
 - ALL EROSION AND SEDIMENT CONTROLS ARE IN-PLACE AND APPEAR TO BE WORKING PROPERLY.
 - AS-BUILT ROAD CENTERLINE DOES NOT MATCH PROPOSED CENTERLINE DUE TO MINOR ADJUSTMENTS MADE WITHIN THE PERMITTED LOD DURING CONSTRUCTION DUE TO FIELD CONDITIONS.
 - SEE COVER FOR CELLAR INFORMATION.

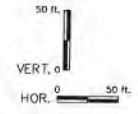


PROFILE LEGEND

	EXISTING GROUND
	AS-BUILT SURVEY GRADE
	AS-BUILT CULVERT



APPROVED
MODIFICATION
WVDEP OOG
WAS 10/7/2019



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NO.	BY	DATE	AS-BUILT	DESCRIPTION
1	JLP	05/16/2019	AS-BUILT	AS-BUILT



APPROVED FOR PERMITS
 BY: RW DATE: 02/19/2018
 APPROVED FOR BID
 BY: RW DATE: 05/16/2018
 APPROVED FOR CONSTRUCTION
 BY: RW DATE: 05/16/2018
 PROJECT No. 101-830-8170

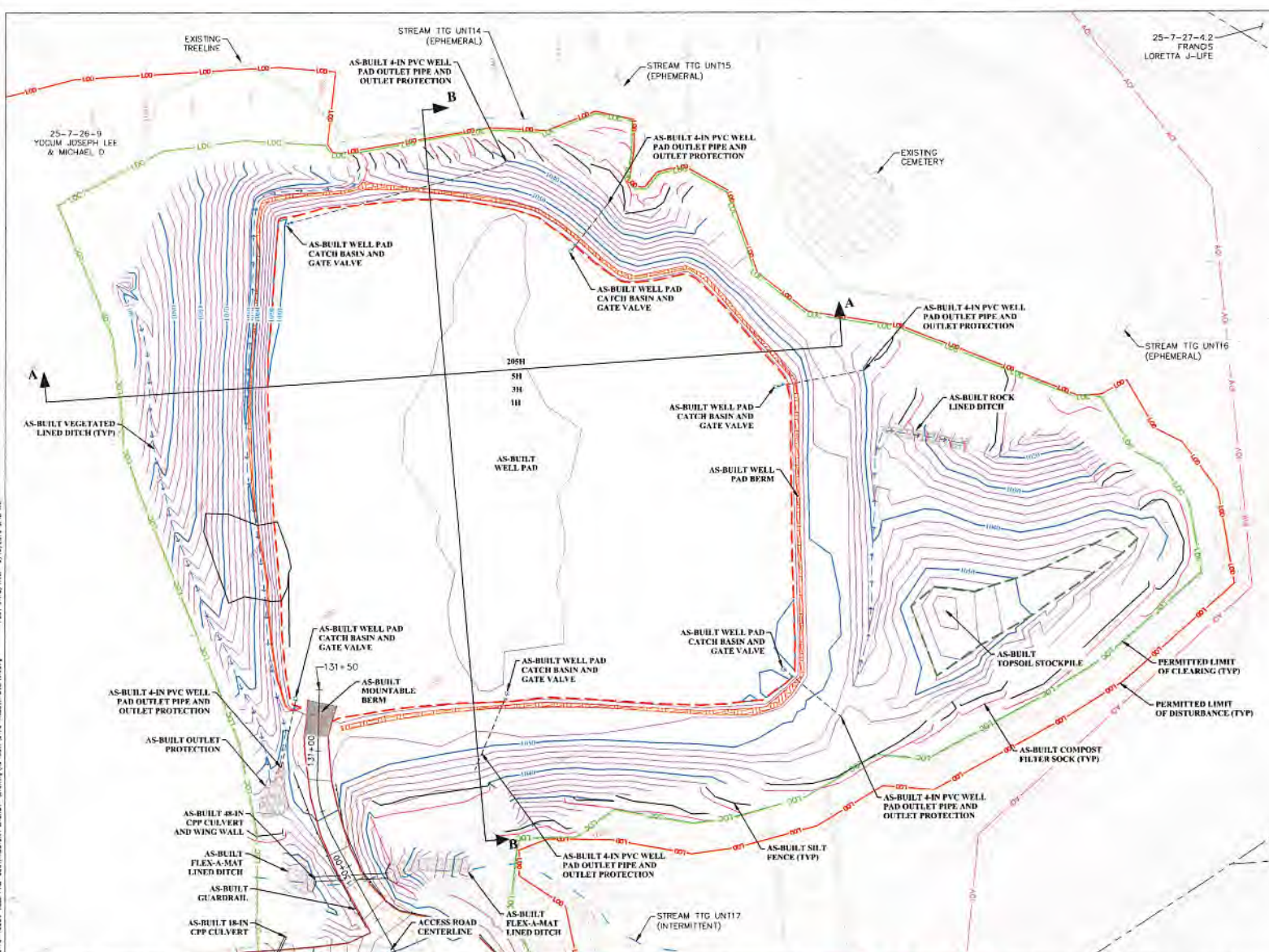


PROJECT OWNER	SWN PRODUCTION COMPANY, LLC
PROJECT NAME	YOCUM WELL PAD
PROJECT LOCATION	MARSHALL COUNTY, WV

SHEET TITLE
**AS-BUILT ACCESS ROAD
 PLAN AND PROFILE**

SHEET No.
8

LAYOUT FILE: 25wep.pln
 CAD FILE: R:\330-310-YOCUM Well Pad-300\INDUSTRIAL\DWG\25-7-26-19-AS-Built\TTC-Admin-Supplies.dwg
 PLOT DATE/TIME: 3/19/2019 8:16 AM



PLAN LEGEND

	EXISTING CONTOURS
	PROPOSED LIMIT OF DISTURBANCE
	AS-BUILT SURVEY CONTOURS
	AS-BUILT SURVEY WELL PAD BERM
	AS-BUILT SURVEY EDGE OF PAD
	AS-BUILT SURVEY EDGE OF ROAD
	AS-BUILT SURVEY EDGE OF TOPSOIL STOCKPILE
	AS-BUILT SURVEY VEGETATED DITCH
	AS-BUILT SURVEY ROCK LINED DITCH
	AS-BUILT SURVEY CULVERT
	AS-BUILT SURVEY COMPOST FILTER SOCK
	AS-BUILT SURVEY SILT FENCE

- NOTES**
- EXISTING FEATURES AND CONTOURS ARE BASED ON AERIAL MAPPING PROVIDED BY H.H. MOISTAR, INC IN FEBRUARY 2007. PHOTOGRAPHY TAKEN ON 26 MARCH 2016.
 - PROJECT DATUM IS NAD-83 DATUM, WEST VIRGINIA STATE PLAINS, NORTH ZONE, US FOOT, CENTRAL MERIDIAN S/D W.
 - AS-BUILT SURVEY PERFORMED BY THRASHER IN JANUARY 2019.
 - ALL EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND APPEAR TO BE WORKING PROPERLY.
 - AS-BUILT ROAD CENTERLINE DOES NOT MATCH PROPOSED CENTERLINE DUE TO ADJUSTMENTS MADE WITHIN THE PERMITTED LOGS DURING CONSTRUCTION DUE TO FIELD CONDITIONS.
 - SEE COVER FOR CELLAR INFORMATION.

**APPROVED
 MODIFICATION
 WVDEP OOG**
WES 10/17/2019



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NO.	BY	DATE	DESCRIPTION

SWN
 Production Company

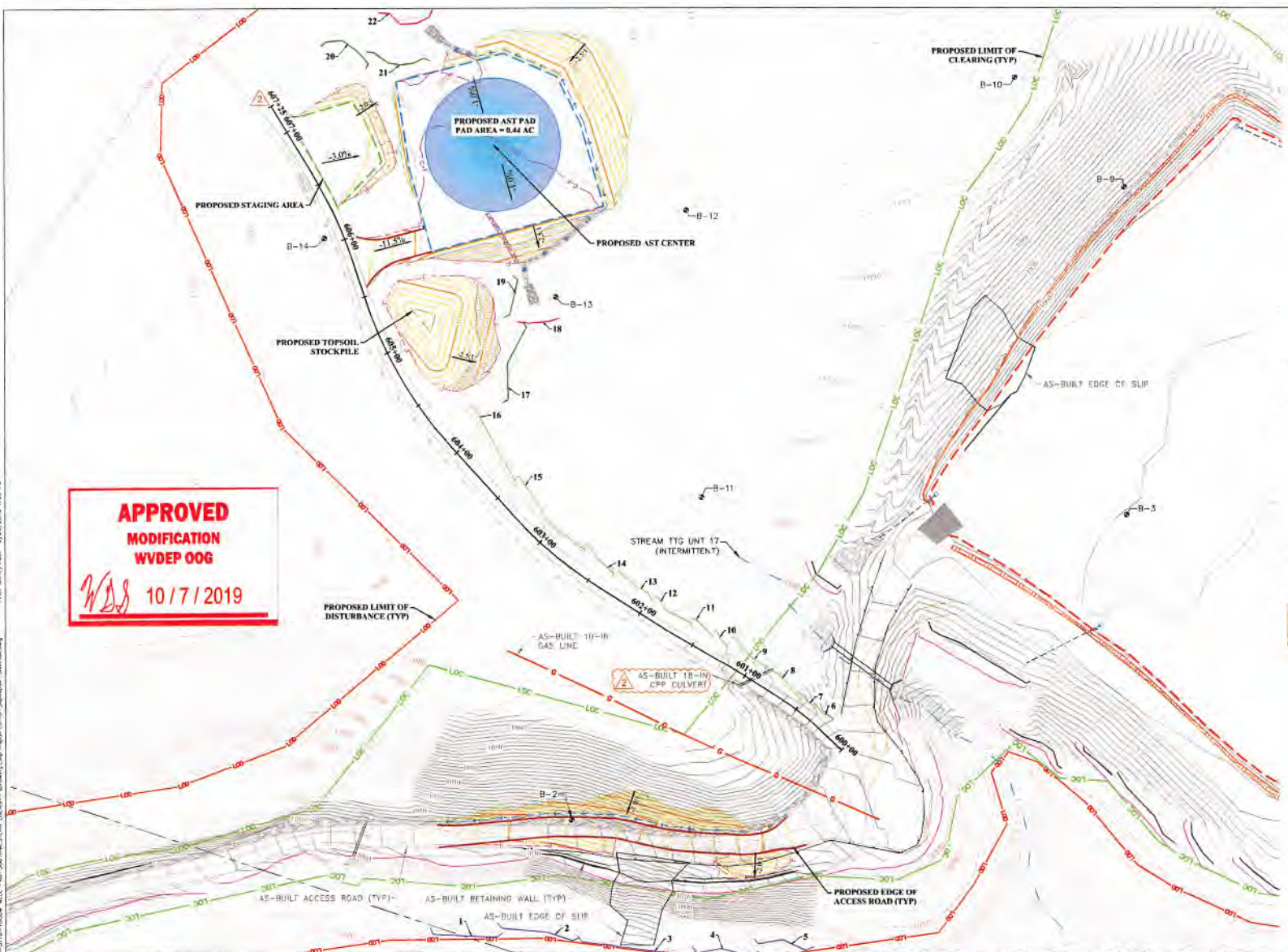
APPROVED FOR PERMITS	DATE: 02/12/2019
BY: RBM	
APPROVED FOR BID	DATE: 02/12/2019
BY: RBM	
APPROVED FOR CONSTRUCTION	DATE: 02/06/2019
BY: RBM	
PROJECT No:	101-030-3170

THE THRASHER GROUP, INC.
 600 WHITE LAKE BOULEVARD DRUMMOND, WV 26330
 PHONE (204) 624-4100 FAX (204) 624-7261

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

SHEET TITLE	SHEET No.
AS-BUILT WELL PAD PLAN	9

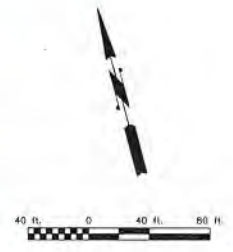
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**APPROVED
 MODIFICATION
 WVDEP OOG**
WAS 10/7/2019

PLAN LEGEND	
	EXISTING CONTOURS
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED LIMIT OF CLEARING
	AS-BUILT SURVEY CONTOURS
	AS-BUILT SURVEY WELL PAD BERM
	AS-BUILT SURVEY EDGE OF PAD
	AS-BUILT SURVEY EDGE OF ROAD
	AS-BUILT SURVEY EDGE OF TOSHOIL STOCKPILE
	AS-BUILT SURVEY VEGETATED DITCH
	AS-BUILT SURVEY ROCK LINED DITCH
	AS-BUILT SURVEY COMPOST FILTER SOCK
	AS-BUILT SURVEY SILT FENCE
	AS-BUILT RETAINING WALL
	EXISTING EDGE OF SLIP
	PROPOSED VEGETATED DITCH
	PROPOSED ROCK LINED DITCH
	PROPOSED CONTOURS
	PROPOSED CUT LIMIT
	PROPOSED FILL LIMIT
	PROPOSED EDGE OF ACCESS ROAD
	PROPOSED 8-IN COMPOST FILTER SOCK
	PROPOSED 14-IN COMPOST FILTER SOCK
	PROPOSED 14-IN COMPOST FILTER SOCK
	PROPOSED STACKED COMPOST FILTER SOCK
	PROPOSED STRAW WATTLE
	PROPOSED EDGE OF STAGING AREA
	PROPOSED EDGE OF ASY PAD
	PROPOSED ROCK CORE DRAIN
	PROPOSED SOH - TOR KEY
	PROPOSED TOE BENCH
	PROPOSED OUTLET PROTECTION

- NOTES**
- EXISTING FEATURES AND CONTOURS ARE BASED ON AERIAL MAPPING PROVIDED BY BLUE MOUNTAIN, INC IN FEBRUARY 2017. MAPPING WAS ESTABLISHED FROM ORTHOGRAPHIC PHOTOGRAPHY TAKEN ON 26 MARCH 2016.
 - PROJECT DATUM IS NAD-83 DATUM, WEST VIRGINIA STATE PLANS, NORTH ZONE, US FOOT, CENTRAL MERIDIAN 81D W.
 - AS-BUILT SURVEY PERFORMED BY THRASHER IN JANUARY 2019.
 - TOE KEYS AND THE BENCHES SHOWN ARE FOR REPRESENTATION ONLY. TOE KEYS AND THE BENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL #18D5 AND #21D6.
 - ALL PROPOSED SLOPES ARE TO BE TRACKED IN ACCORDANCE WITH DETAIL #5D1.
 - SEE COMPOST FILTER SOCK SCHEDULE ON DETAIL #5D2 FOR SECTIONS THAT MAY BE REPLACED WITH SILT SAVER PRIORITY 1 (DETAIL #2D1) OR SUPER SILT FENCE (DETAIL #6D2).
 - PROPOSED CONTOURS SHOWN INSIDE THE TANK PAD REPRESENT THE SUBGRADE SURFACE. THE STONE SURFACE SHALL BE GRADED IN ACCORDANCE WITH THE DETAILS AND TYPICAL SECTIONS SHOWN WITHIN THESE PLANS. PROPOSED CONTOURS IN ALL OTHER LOCATIONS REPRESENT FINISH GRADE.
 - ALL CONSTRUCTED SLOPES SHALL BE STABILIZED WITH HYDRAULICALLY APPLIED EROSION CONTROL BLANKET OR BOLDED EROSION CONTROL. SLOPE MATTING. SEE DETAIL #3D1 AND #15D4.
 - ALL SURVEY STAKES SHALL FOLLOW SWN FLAGGING / STAKING STANDARDS. SEE DETAIL #4D1.
 - ALL EARTHWORK IS TO BE PERFORMED IN ACCORDANCE WITH THE GENERAL NOTES AND DETAILS CONTAINED WITHIN THESE PLANS.



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NO	BY	DATE	DESCRIPTION
2	JCA	05/23/2018	REVISED PER DEP COMMENTS
1	JR	05/18/19	ADDED THIS SHEET

SWN
 Production Company

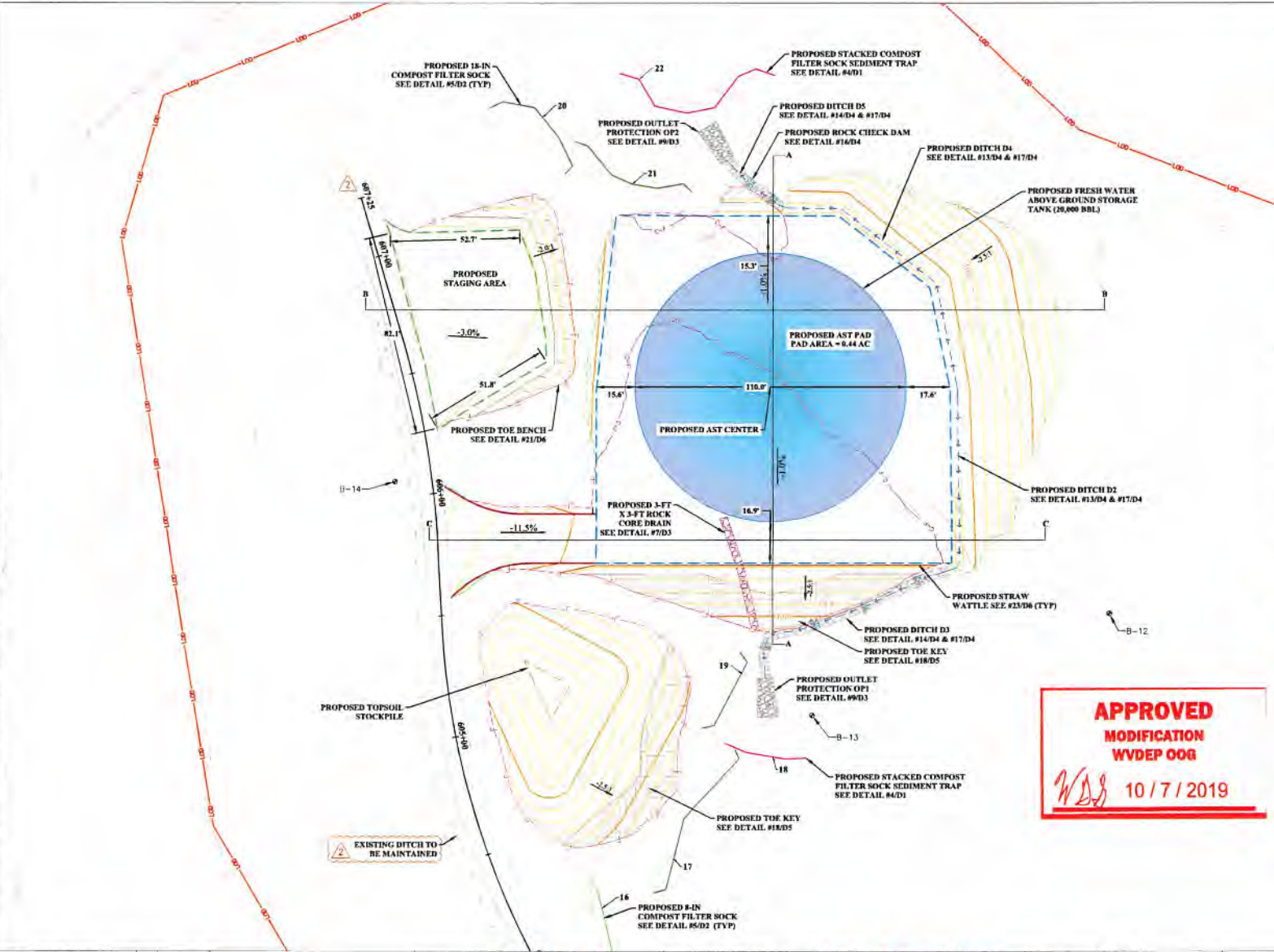
APPROVED FOR PERMITS	
BY: RBM	DATE: 02/19/2018
APPROVED FOR DE	
BY: RBM	DATE: 05/16/2018
APPROVED FOR CONSTRUCTION	
BY: RBM	DATE: 08/29/2018
PROJECT NO: 101-030-3170	

THRASHER
 THE THRASHER GROUP, INC.
 4100 WHITE OAK BULLYARD, BRIDGESPORT, WV 26330
 PHONE (304) 824-4100 FAX (304) 624-7531

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

SHEET TITLE		SHEET No.
YOCUM SLIP REPAIR OVERALL PLAN		R1

LAYOUT: 046 002-SEC-PLAN
 DATE: 10/16/2018 10:00 AM
 PLOT DATE/TIME: 8/27/2018 1:08 PM
 WITH: TAC-SOUTHWESTERN ENERGY SERVICES REPORT 3170-01-01-001-001

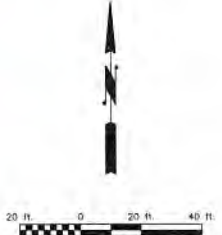


PLAN LEGEND

	EXISTING CONTOUR
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED LIMIT OF CLEARING
	AS-BUILT SURVEY CONTOUR
	AS-BUILT SURVEY WELL PAD BERM
	AS-BUILT SURVEY EDGE OF PAD
	AS-BUILT SURVEY EDGE OF ROAD
	AS-BUILT SURVEY EDGE OF TOPSOIL STOCKPILE
	AS-BUILT SURVEY VEGETATED DITCH
	AS-BUILT SURVEY ROCK LINED DITCH
	AS-BUILT SURVEY CULVERT
	AS-BUILT SURVEY COMPOST FILTER SOCK
	AS-BUILT SURVEY SILT FENCE
	AS-BUILT RETAINING WALL
	EXISTING EDGE OF SLIP
	PROPOSED VEGETATED DITCH
	PROPOSED ROCK LINED DITCH
	PROPOSED CONTOUR
	PROPOSED CUT LIMIT
	PROPOSED FILL LIMIT
	PROPOSED EDGE OF ACCESS ROAD
	PROPOSED 4-IN COMPOST FILTER SOCK
	PROPOSED 18-IN COMPOST FILTER SOCK
	PROPOSED 24-IN COMPOST FILTER SOCK
	PROPOSED STACKED COMPOST FILTER SOCK
	PROPOSED STRAW WATTLE
	PROPOSED EDGE OF STAGING AREA
	PROPOSED EDGE OF AST PAD
	PROPOSED ROCK CORE DRAIN
	PROPOSED SOIL TOE KEY
	PROPOSED TOE BENCH
	PROPOSED OUTLET PROTECTION

- ### NOTES
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 - AS-BUILT SURVEY PERFORMED BY THRASHER IN JANUARY 2019.
 - TOE KEYS AND TOE BENCHES SHOWN ARE FOR REPRESENTATION ONLY. TOE KEYS AND TOE BENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL #18/D5 AND #21/D6.
 - ALL PROPOSED SLOPES ARE TO BE TRACKED IN ACCORDANCE WITH DETAIL #3/D1.
 - SEE COMPOST FILTER SOCK SCHEDULE ON DETAIL #5/D2 FOR SECTIONS THAT MAY BE REPLACED WITH SILT SAVER PRIORITY 1 (DETAIL #2/D1) OR SILT FENCE (DETAIL #6/D2).
 - PROPOSED CONTOURS SHOWN INSIDE THE TANK PAD REPRESENT THE SUBGRADE SURFACE. THE STONE SURFACE SHALL BE GRADED IN ACCORDANCE WITH THE DETAILS AND TYPICAL SECTIONS SHOWN WITHIN THESE PLANS. PROPOSED CONTOURS IN ALL OTHER LOCATIONS REPRESENT FINISH GRADE.
 - ALL CONSTRUCTED SLOPES SHALL BE STABILIZED WITH HYDRAULICALLY APPLIED EROSION CONTROL BLANKET OR ROLLED EROSION CONTROL SLOPE MATTING. SEE DETAIL #1/D1 AND #15/D4.
 - ALL SURVEY STAKES SHALL FOLLOW SWN FLAGGING / STAKING STANDARDS. SEE DETAIL #8/D1.
 - ALL EARTHWORK IS TO BE PERFORMED IN ACCORDANCE WITH THE GENERAL NOTES AND DETAILS CONTAINED WITHIN THESE PLANS.

**APPROVED
 MODIFICATION
 WVDEP OOG**
WDS 10/7/2019



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NO.	BY	DATE	DESCRIPTION
2	JCA	09/25/19	REVISED PER DEP COMMENTS
1	AW	09/19/19	ADDED THIS SHEET
NO	BY	DATE	DESCRIPTION



APPROVED FOR PERMITS	BY: RBM	DATE: 02/19/2018
APPROVED FOR RES	BY: RBM	DATE: 05/18/2018
APPROVED FOR CONSTRUCTION	BY: RBM	DATE: 08/08/2018
PROJECT NO:	101-030-5170	

THRASHER
 THE THRASHER GROUP, INC.
 902 WHITE OAKS SCULLWAGS, DRESDEN, WV 26030
 PHONE (304) 624-4190 FAX (304) 624-3837

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

**YOCUM SLIP REPAIR
 AST PLAN**

SHEET TITLE
R3

AS-BUILT PLANS FOR YOCUM WELL PAD AND ACCESS ROAD LIBERTY DISTRICT, MARSHALL COUNTY, WV FEBRUARY 2019

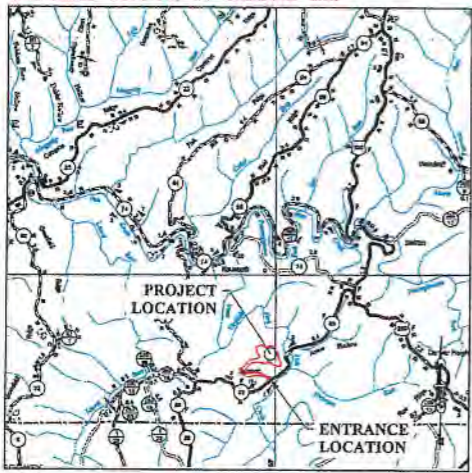
RECEIVED
Office of Oil and Gas

JUL 20 2022

WV Department of
Environmental Protection

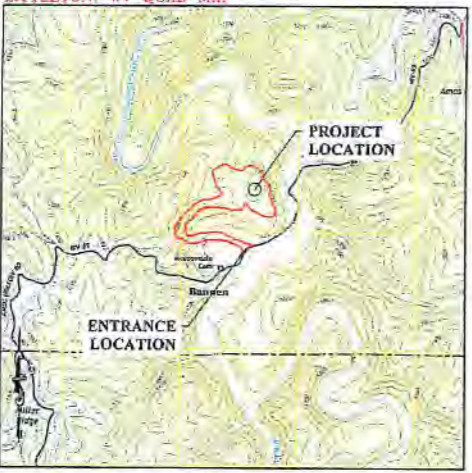
MJK
7/16/2022

MARSHALL COUNTY, WV HIGHWAY MAP



1 MILE 0 1 MILE 2 MILES
HIGHWAY MAP SCALE

LITTLETON, WV QUAD MAP



2000' 0 2000' 4000'
VICINITY MAP SCALE

ONE CALL UTILITY SYSTEM CONTACT INFO



CONTRACTOR SHALL NOTIFY THE ONE-CALL SYSTEM OF THE INTENDED EXCAVATION OR DEMOLITION NOT LESS THAN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL FEDERAL OR STATE HOLIDAYS, NOR MORE THAN TEN (10) WORK DAYS PRIOR TO THE BEGINNING OF SUCH WORK.

TOPHOLE COORDINATES

Well Number	WV83-N Latitude	WV83-N Longitude	UTM 83-17 Northing	UTM 83-17 Easting
205H	N 39.732964°	W 80.583491°	14429769.221 ft	1757513.640 ft
5H	N 39.732946°	W 80.583518°	14429762.709 ft	1757506.049 ft
3H	N 39.732929°	W 80.583545°	14429756.199 ft	1757498.460 ft
1H	N 39.732911°	W 80.583572°	14429749.720 ft	1757490.871 ft
SLOT 5	N 39.732893°	W 80.583600°	14429743.188 ft	1757483.283 ft
SLOT 6	N 39.732875°	W 80.583627°	14429736.678 ft	1757475.694 ft
SLOT 7	N 39.732857°	W 80.583654°	14429730.173 ft	1757468.105 ft
SLOT 8	N 39.732840°	W 80.583681°	14429723.667 ft	1757460.516 ft
SLOT 9	N 39.732822°	W 80.583708°	14429717.157 ft	1757452.928 ft
SLOT 10	N 39.732804°	W 80.583735°	14429710.651 ft	1757445.339 ft
SLOT 11	N 39.732786°	W 80.583762°	14429704.145 ft	1757437.750 ft
SLOT 12	N 39.732769°	W 80.583789°	14429697.636 ft	1757430.161 ft
SLOT 13	N 39.732751°	W 80.583816°	14429691.130 ft	1757422.572 ft
SLOT 14	N 39.732733°	W 80.583843°	14429684.620 ft	1757414.983 ft
SLOT 15	N 39.732715°	W 80.583871°	14429678.115 ft	1757407.394 ft
SLOT 16	N 39.732697°	W 80.583898°	14429671.609 ft	1757399.805 ft
SLOT 17	N 39.732679°	W 80.583925°	14429665.103 ft	1757392.216 ft
SLOT 18	N 39.732661°	W 80.583952°	14429658.597 ft	1757384.627 ft
SLOT 19	N 39.732643°	W 80.583979°	14429652.091 ft	1757377.038 ft
SLOT 20	N 39.732625°	W 80.584006°	14429645.585 ft	1757369.449 ft
SLOT 21	N 39.732607°	W 80.584033°	14429639.079 ft	1757361.860 ft
SLOT 22	N 39.732589°	W 80.584060°	14429632.573 ft	1757354.271 ft
SLOT 23	N 39.732571°	W 80.584087°	14429626.067 ft	1757346.682 ft
SLOT 24	N 39.732553°	W 80.584114°	14429619.561 ft	1757339.093 ft
SLOT 25	N 39.732535°	W 80.584141°	14429613.055 ft	1757331.504 ft
SLOT 26	N 39.732517°	W 80.584168°	14429606.549 ft	1757323.915 ft
SLOT 27	N 39.732499°	W 80.584195°	14429600.043 ft	1757316.326 ft
SLOT 28	N 39.732481°	W 80.584222°	14429593.537 ft	1757308.737 ft
SLOT 29	N 39.732463°	W 80.584249°	14429587.031 ft	1757301.148 ft
SLOT 30	N 39.732445°	W 80.584276°	14429580.525 ft	1757293.559 ft
SLOT 31	N 39.732427°	W 80.584303°	14429574.019 ft	1757285.970 ft
SLOT 32	N 39.732409°	W 80.584330°	14429567.513 ft	1757278.381 ft

DISTURBANCE SUMMARY

Property Owner (Tax Map / Parcel)	Access Road Disturbance	Well Pad Disturbance	Total Disturbance
Yocum Joseph Lee & Michael D (25-7-26-8)	2.94	16.97	19.91
Yocum Joseph Lee & Michael D (25-7-27-4)	7.66	0.00	7.66
Yocum Joseph Lee & Michael D (25-7-27-5)	0.25	0.00	0.25
High Philip D (25-7-27-8)	0.11	0.00	0.11
Total Disturbance	10.96	16.97	27.93

SITE COORDINATES

Coordinate Label	Well Pad Center	Access Road Beginning	AST Center
WV83-N Latitude	N 39.732854°	N 39.728937°	N 39.733899°
WV83-N Longitude	W 80.583723°	W 80.584823°	W 80.585613°
WV83-N Northing	450851.731 ft	445822.465 ft	451268.087 ft
WV83-N Easting	1663725.923 ft	1663403.685 ft	1663199.057 ft
UTM 83-17 Northing	14429728.998 ft	14428665.345 ft	14430106.875 ft
UTM 83-17 Easting	1757448.629 ft	1757444.214 ft	1756915.538 ft
UTM 83-17 Northing	4399109.175 m	4397865.893 m	4388395.272 m
UTM 83-17 Easting	535671.411 m	535578.626 m	535508.927 m

WELLS

WELL NAME	API NUMBER	CELLAR DIAMETER	CELLAR DEPTH	CELLAR MATERIAL
PERMITTED YOCUM MSH 5H	051-02034	18"	10'	CELLAR TECH
PERMITTED YOCUM MSH 3H	051-02124	18"	10'	CELLAR TECH
PERMITTED YOCUM MSG 205H	051-02125	18"	10'	CELLAR TECH
PERMITTED YOCUM MSH 1H	051-02133	18"	10'	CELLAR TECH

DRIVING DIRECTIONS FROM CAMERON, WV

- FROM DOWNTOWN CAMERON 5-WAY STOP
1. HEAD SOUTH ON WILEY (361-FT)
 2. TURN LEFT ONTO US-250 S / MAPLE AVE (8.4-mi)
 3. TURN RIGHT ONTO AMOS HOLLOW RD (2.0-mi)
 4. DESTINATION WILL BE ON THE RIGHT.



APPROVED FOR PERMITS DATE: 2/19/18 BY: RBM
 APPROVED FOR BIDS DATE: 5/16/18 BY: RBM
 APPROVED FOR CONSTRUCTION DATE: 8/8/18 BY: RBM

REVISION NUMBER	REVISED SHEETS	BY	DATE	DESCRIPTION
1	1,4,8,R1-R8 & D1-D7	JCA & JRP	09/19/19	ADDED SUP REPAIR PLANS & DETAILS



OPERATOR
SWN PRODUCTION COMPANY, LLC
179 Innovation Drive
Jane Lew, WV 26378
(304) 884-1610



CAD FILE: R:\030-3700-YOCUM WELL PAD-CONSTRUCTION ENERGY-030303700-001\1070-14811-Cover.dwg
 PLOT DATE/TIME: 9/19/2019 2:08 PM
 USER: jones@swncorp.com

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