



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, August 19, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for VERNON JOHNSON WTZ 601H
47-103-03521-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

A blue ink signature of James A. Martin, written in a cursive style, is placed over the printed name and title.

Operator's Well Number: VERNON JOHNSON WTZ 601H
Farm Name: VERNON S JOHNSON ESTA
U.S. WELL NUMBER: 47-103-03521-00-00
Horizontal 6A New Drill
Date Issued: 8/19/2022

Promoting a healthy environment.

08/26/2022

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.

08/26/2022

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 103-Wetzel 3-Clay 438-Littleton
Operator ID County District Quadrangle

2) Operator's Well Number: Vernon Johnson WTZ 601H Well Pad Name: Vernon Johnson WTZ

3) Farm Name/Surface Owner: Vernon S. Johnson Estate Public Road Access: Rice Ridge Road

4) Elevation, current ground: 1432' Elevation, proposed post-construction: 1432'

5) Well Type (a) Gas Oil Underground Storage
Other _____
(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Up-Dip well to the North, Target Top TVD- 7663', Target Base TVD-7712', Anticipated Thickness- 49', Associated Pressure- 5013

8) Proposed Total Vertical Depth: 7690'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 30549'

11) Proposed Horizontal Leg Length: 21687.61'

12) Approximate Fresh Water Strata Depths: 440'

13) Method to Determine Fresh Water Depths: Salinity Profile and Nearby Logs on Vernon Johnson WTZ 10H API 47-103-02714

14) Approximate Saltwater Depths: 1795' Salinity profile analysis and Nearby Logs

15) Approximate Coal Seam Depths: 1277'

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

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No

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

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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	J-55	54.4#	540'	540' ✓	655 sx/CTS
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J-55	36#	0'	2600' ✓	1608 sx/CTS
Intermediate	9 5/8"	New	J/K-55	40#	2600'	3177' ✓	
Production	6"	New	P-110	24.5#	0'	5000' ✓	
Production	5 1/2"	New	P-110 HP	20#	5000'	30549' ✓	Tail 5981sx/ 100' Inside Intermediate

L. Reynolds
7-7-22

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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WW-6B
(10/14)

API NO. 47-009 -
OPERATOR WELL NO. Vernon Johnson WTZ 60111
Well Pad Name: Vernon Johnson WTZ

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 unites, 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): 8.4

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

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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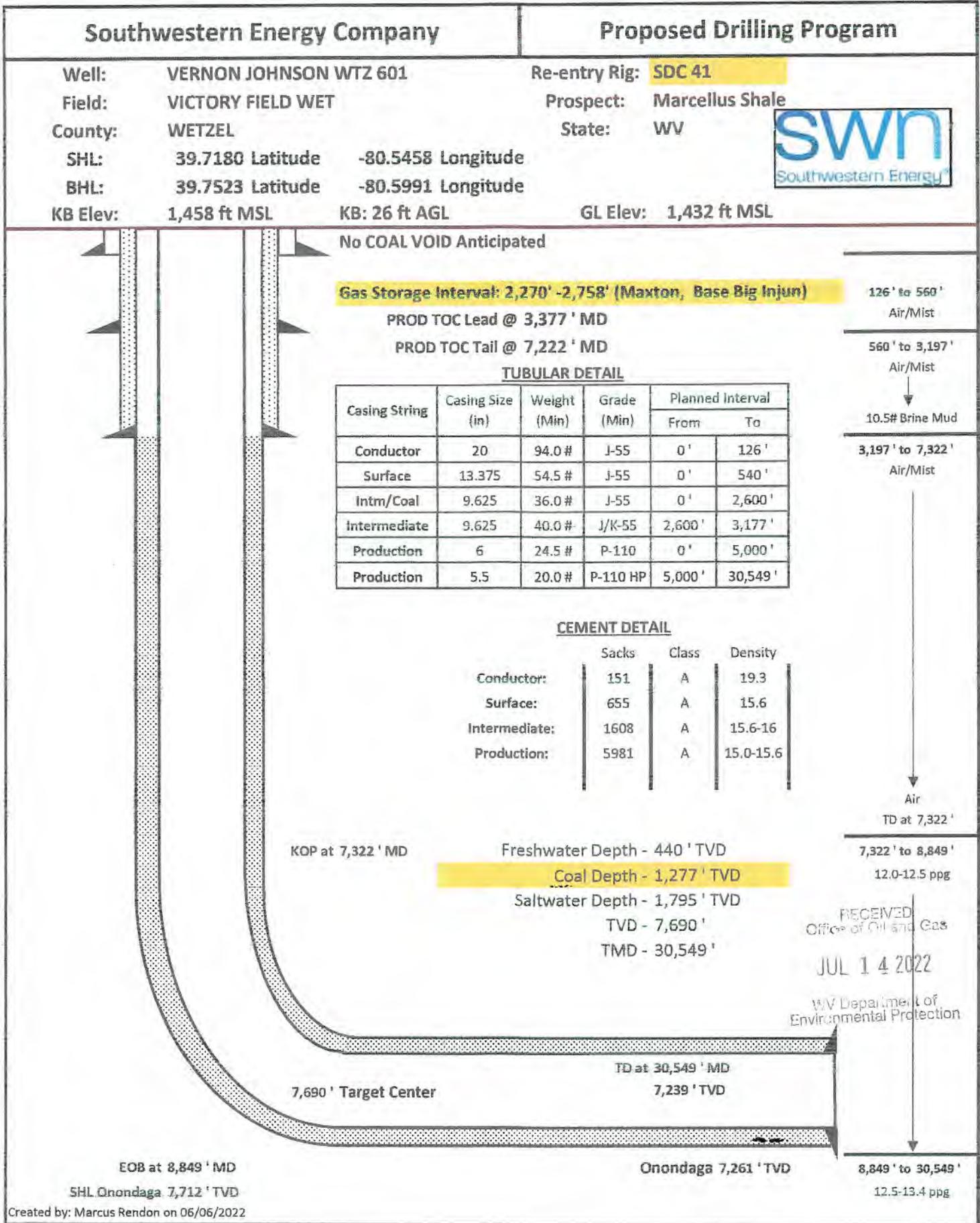
*Note: Attach additional sheets as needed.

CEMENT ADDITIVES

INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTIER PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER) up to 3%	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION up to 3%	XXXXXXXXXX	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	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	CemNet	XXXXXXXXXX	XXXXXXXXXX	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	XXXXXXXXXX	XXXXXXXXXX	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	XXXXXXXXXX	SS-11W	CJ880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	D047	FP 28L	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	XXXXXXXXXX	CJX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	XXXXXXXXXX	XXXXXXXXXX	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATIC AMIDE POLYMER	PROPRIETARY
	D255	XXXXXXXXXX	XXXXXXXXXX	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	XXXXXXXXXX	XXXXXXXXXX	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
	XXXXXXXXXX	FL-66	CJ501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	XXXXXXXXXX	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	XXXXXXXXXX	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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08/26/2022



4710303521

WW-9
(4/16)

API Number 47 - 103 - _____
Operator's Well No. Vernon Johnson WTZ 601H

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) West Virginia Fork Fish Creek Quadrangle Littleton

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 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 U6-U8438, 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

Office of Oil and Gas
JUL 14 2022
WV Department of Environmental Protection

Subscribed and sworn before me this 1st day of June, 2022
Reil Craft Notary Public

My commission expires 6/21/2024



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 hole is utilized to recover the processed cuttings for loading into containers for hauloff. (See attached schematic of a generic closed loop system layout)

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

AIR DRILLING INTERVALS

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

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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

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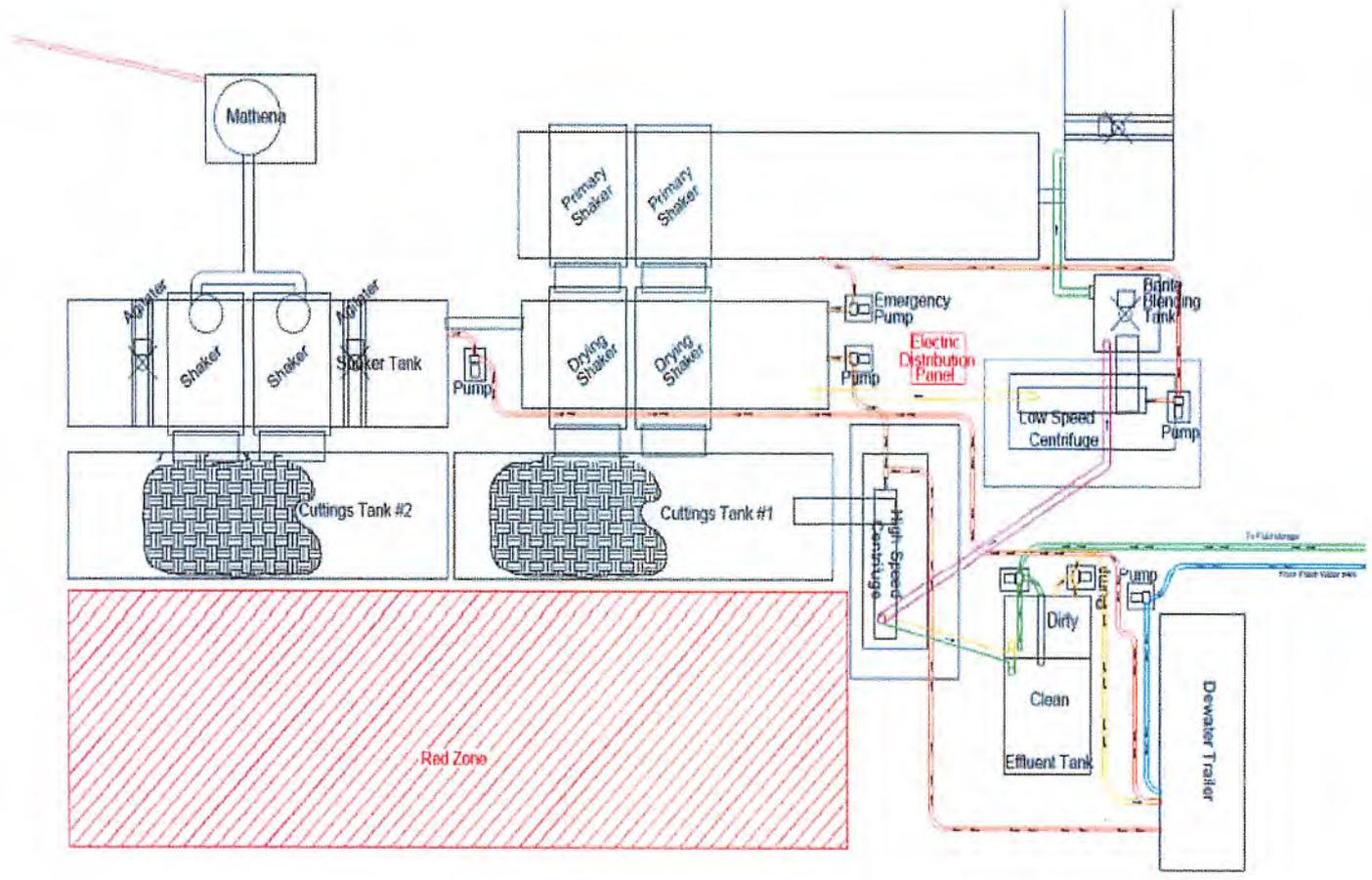
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Solids Control Layout



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EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM

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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SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 8.4 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 5.9

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: *James L. Reynolds*

Comments: _____

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Title: Oil & Gas Inspector

Date: 7-7-22

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Field Reviewed? () Yes

() No



WVD Seeding Specification

R⁺ → V⁺
A

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

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

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

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

Synopsis:

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

Special Considerations:

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

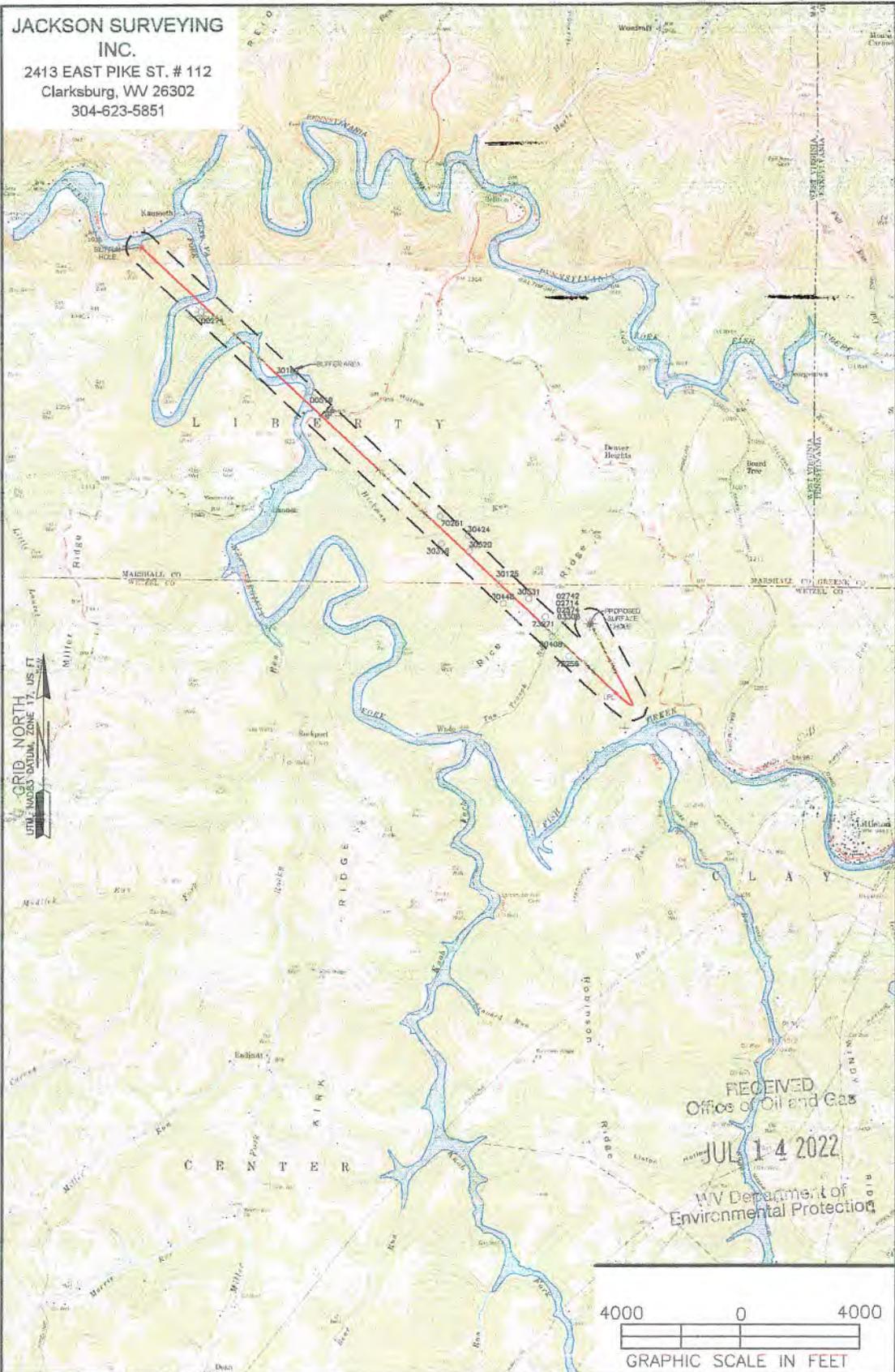
ORGANIC PROPERTIES	
Seed Mixture: SWN Production Organic Mix	SWN Supplied
Organic Timothy	50%
Organic Red or White Clover	50%
OR	
Organic Perennial Ryegrass	50%
Organic Red or White Clover	50%
Apply @ 100lbs per acre April 16th- Oct. 14th	
Apply @ 200lbs per acre Oct. 15th- April 15th	
Organic Fertilizer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

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

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4710303521

**JACKSON SURVEYING
INC.**
2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851



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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 PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

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

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: VERNON JOHNSON WTZ	WELL # 601H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD SUITE 200 MORGANTOWN, WV 26308	COUNTY - CODE WETZEL - 103	DISTRICT; CLAY	API #: 047-103-
SURFACE OWNER: VERNON S. JOHNSON ESTATE	USGS 7 1/2 QUADRANGLE MAP NAME LITTLETON, WV		

08/26/2022

4710303521

API #	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
73256	Unknown	Unknown	***	***	Unknown	Unknown	
30408	Unknown	Unknown	***	***	3,310	Gordon	
73271	Unknown	Unknown	***	***	Unknown	Unknown	
30531	Unknown	Unknown	***	***	Unknown	Unknown	
30446	Unknown	Unknown	***	***	3,148	Gordon	
30125	Unknown	Unknown	***	***	3,126	Gordon	
30320	Unknown	Unknown	***	***	Unknown	Unknown	
30319	Unknown	Unknown	***	***	3,229	Gordon	
30424	Unknown	Unknown	***	***	Unknown	Unknown	
70261	Unknown	Unknown	***	***	Unknown	Unknown	
0519-P	Unknown	Unknown	***	***	2,046	Unknown	
30182	Unknown	Unknown	***	***	Unknown	Unknown	
0274-P	Unknown	Unknown	***	***	2,053	Unknown	

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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: Vernon Johnson WTZ 601H
Littleton QUAD
Clay DISTRICT
WETZEL COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody

Date: 5/31/2022

Brittany Woody

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: *Kenneth L. Reynolds*

Date: 7-7-22

Title: _____

Approved by:

Name: _____

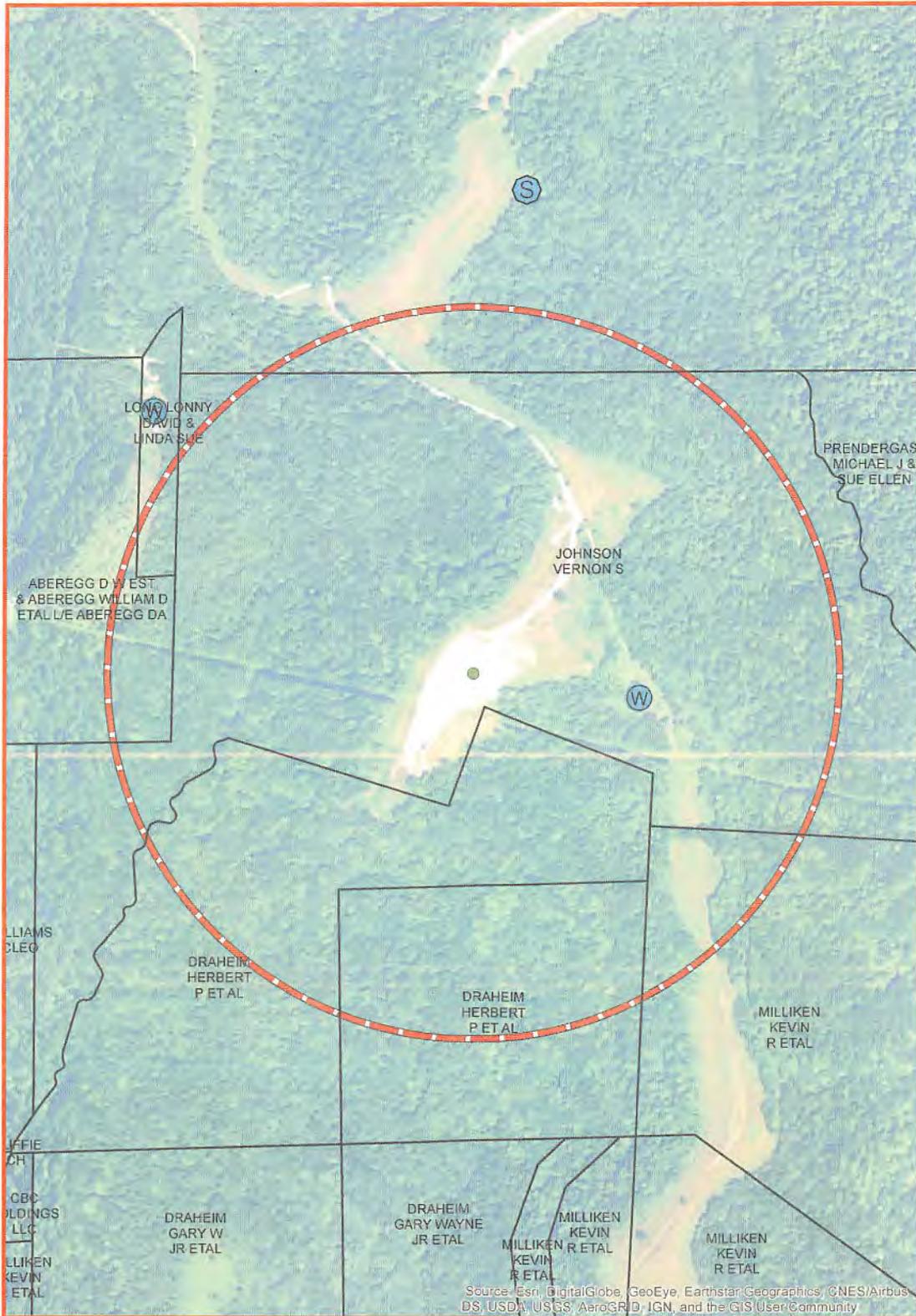
Date: _____

Title: _____

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WV Department of
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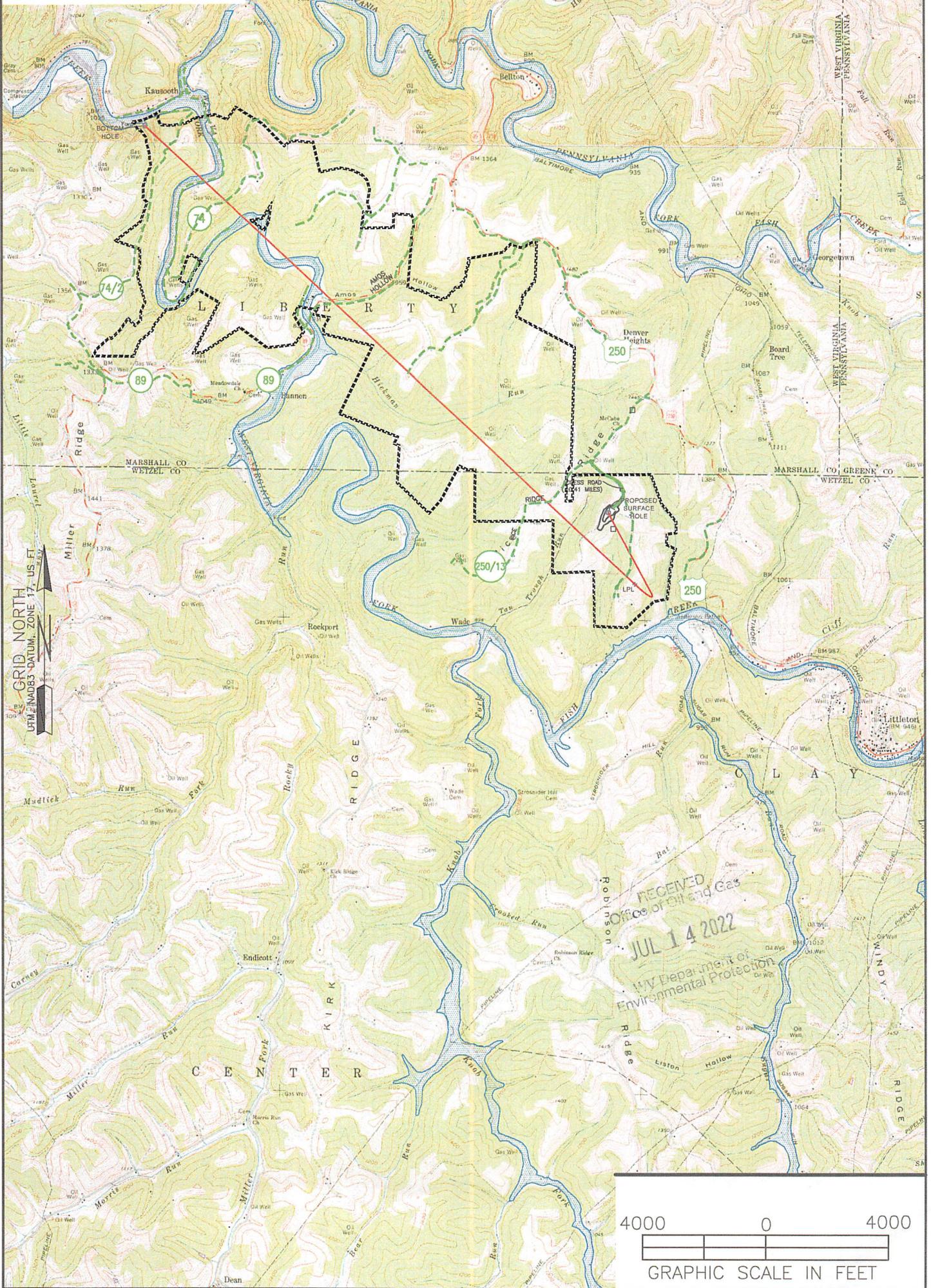


The intent of this map is for general reference only. Information on this map was created using the best available data at the time but is not guaranteed accurate.

<h3>Water Purveyor Map</h3>				Well Pad: Vernon Johnson WTZ Pad	County: WETZEL
		Map by: spart NAD 1983 BLM Zone 17N ftUS	Date: 10/12/2017 	Vernon Johnson WTZ Coordinates: 39.718029, -80.545754	
0 250 500 1,000 1,500 2,000 Feet					

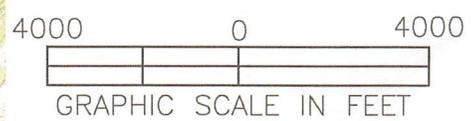
**JACKSON SURVEYING
INC.**
2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

47 10 30 35 21



GRID NORTH
UTM 18AD83 DATUM, ZONE 17 - US FT

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

- LEGEND:**
- PROPOSED SURFACE HOLE / BOTTOM HOLE
 - ★ EXISTING / PRODUCING WELLHEAD
 - ★ LPL: LANDING POINT LOCATION
 - FLOOD PLAN
 - ACCESS ROAD
 - - - PUBLIC ROAD
 - ACCESS ROAD TO PREV. SITE
 - = = = = = LEASE BOUNDARY
 - PROPOSED PATH
 - ASDRILLED PATH

08/26/2022

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: VERNON JOHNSON WTZ	WELL # 601H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD SUITE 200 MORGANTOWN, WV 26308	COUNTY - CODE WETZEL - 103	DISTRICT; CLAY	API #: 047-103-
SURFACE OWNER: VERNON S. JOHNSON ESTATE	USGS 7 1/2 QUADRANGLE MAP NAME LITTLETON, WV	PROPERTY NUMBER 2501174256	

Latitude: 39°45'00" SURFACE HOLE 1,175'

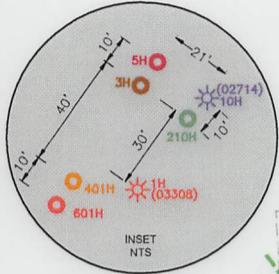
JACKSON SURVEYING INC.

Latitude: 39°47'30" BOTTOM HOLE 4,443'

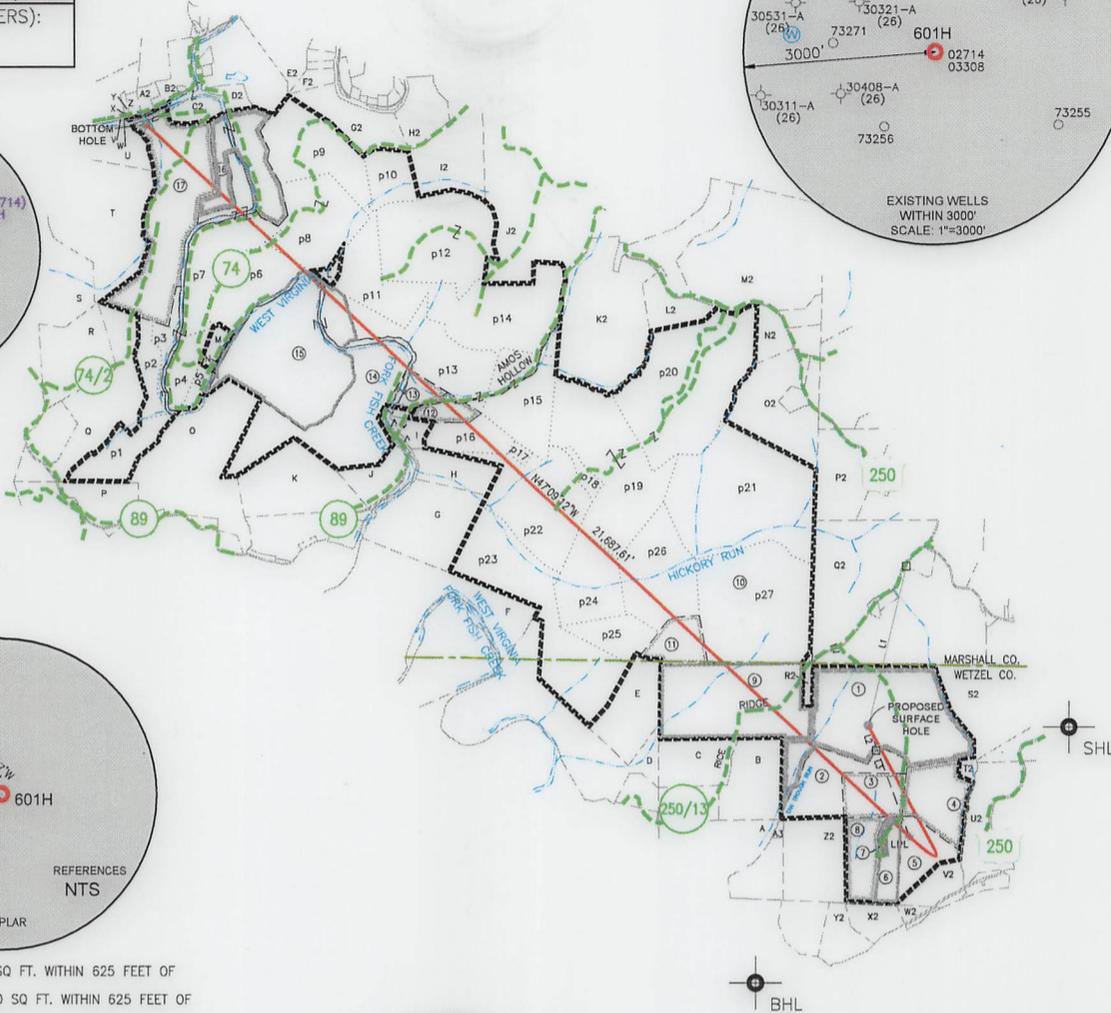
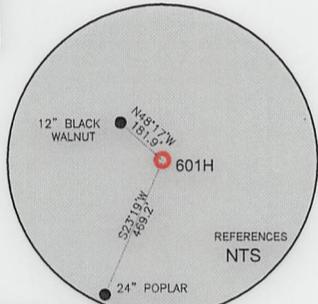
2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

Table with 2 columns: Location Name and UTM Coordinates (Northings, Eastings). Includes Surface Hole Location (SHL), Landing Point Location (LPL), and Bottom Hole Location (BHL).

Table with 5 columns: LINE, BEARING, DISTANCE, DESCRIPTION, MONUMENT. Contains data for lines L1, L2, and L3.



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



Longitude: 80°35'00"
Longitude: 80°32'30"

WELL RESTRICTIONS

- 1. NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
3. NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
4. NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
6. NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

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

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



P.S. 708

David L Jackson



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

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

COMPANY: SWN Production Company, LLC

VERNON JOHNSON WTZ
OPERATOR'S WELL #: 601H
API WELL #: 47 STATE 103 COUNTY 03521 PERMIT

WELL TYPE: OIL [] WASTE DISPOSAL [] PRODUCTION [X] DEEP [] GAS [X] LIQUID INJECTION [] STORAGE [] SHALLOW [X]
WATERSHED: WEST VIRGINIA FORK FISH CREEK (HUC-10) ELEVATION: 1,431.5'
DISTRICT: CLAY COUNTY: WETZEL QUADRANGLE: LITTLETON, WV
SURFACE OWNER: VERNON S. JOHNSON ESTATE ACREAGE: ±132.00
OIL & GAS ROYALTY OWNER: AMP FUND III; LP: ALICE M. ABEREGG; ELLEN ABEREGG; JAMES J. ABEREGG; KEITH ABEREGG; BRIAN F. BUTLER; RED STONE RESOURCES, LLC; JAMES STONEKING ACREAGE: ±132.00
DRILL [] DRILL DEEPER [] REDRILL [] FRACTURE OR STIMULATE [] PLUG OFF OLD FORMATION [] PERFORATE NEW FORMATION []
CONVERT [] PLUG & ABANDON [] CLEAN OUT & REPLUG [] OTHER CHANGE [X] (SPECIFY)
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,690' TVD 30,549' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT ROAD SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD SUITE 200
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND: PROPOSED SURFACE HOLE / BOTTOM HOLE, EXISTING / PRODUCING WELLHEAD, LPL, EXISTING WATER WELL, EXISTING SPRING, SURVEYED BOUNDARY, DRILLING UNIT, LEASE BOUNDARY, ASDRILLED PATH, PROPOSED PATH

REVISIONS: DATE: 06-13-2022
DRAWN BY: N. MANO
SCALE: 1" = 4000'
DRAWING NO:
WELL LOCATION PLAT

JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
 304-623-5851

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	JOHNSON VERNON S EST (S)/ AMP FUND III; LP; ALICE M. ABEREGG; ELLEN ABEREGG; JAMES J. ABEREGG; KEITH ABEREGG; BRIAN F. BUTLER; RED STONE RESOURCES, LLC; JAMES STONEKING (R)	3-1-1
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	DRAHEIM HERBERT P ET AL (S)	3-1-6
3	DRAHEIM HERBERT P ETAL (S)	3-1-5
4	MILLIKEN KEVIN R ETAL (S)	3-1-4
5	MILLIKEN KEVIN R ETAL (S)	3-1-13
6	MILLIKEN KEVIN R ETAL (S)	3-1-12
7	MILLIKEN KEVIN R ETAL (S)	3-1-11
8	DRAHEIM GARY WAYNE JR ETAL (S)	3-1-10
9	ABEREGG D W EST & ABEREGG WILLIAM D ETAL L/E ABEREGG DA (S)	1-3-2
10	W VA WILDLIFE RESOURCES SECTION (S)	7-24-1
11	JOHN R. ISIMINGER; LAWRENCE W. MCCLELLAND; MICHAEL CLAY WADE(S)	7-24-6
12	PETER VELLEKOOP & LINDA VELLEKOOP (S)	7-26-6.1
13	GEDEON DANIEL D ET UX (S)	7-26-6
14	YOCUM JOSEPH LEE & MICHAEL D (S)	7-26-9
15	CONSOLIDATED GAS SUPPLY CORP (S)	7-26-8
16	FROMHART BRAD ET UX - LIFE (S)	7-20-41
17	GRIBBEN M PEGGY REVOCABLE LIVING TRUST (S)	7-19-28

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	MCGUFFIE ARCH	1-6-5
B	WILLIAMS JOHN EDWARD	1-3-9
C	WILLIAMS LONNIE L	1-3-7
D	SEIDLER EARL DALE & NETTIE	1-2-6.1
E	WILLIAMS KATHERINE E TRUST	1-3-1
F	VELLEKOOP PETER B ET UX - TOD	7-27-13
G	VELLEKOOP PETER B ET UX - TOD	7-27-11
H	VELLEKOOP PETER B ET UX - TOD	7-27-10.1
I	VELLEKOOP PETER B ET UX - TOD	7-27-6.2
J	STIPETICH SUSAN F & FRANK R	7-27-4.2
K	YOCUM JOSEPH LEE & MICHAEL D	7-27-4
L	BUZZARD COLIN R	7-26-3
M	HUNDRED RESOURCES IN C	7-26-11
N	BUTLER JOHN M & LISA A	7-26-11.1
O	HORNER DELORSE A	7-26-10
P	WADE EDWARD E JR	7-27-2
Q	MORGAN JAMES E - LIFE	7-26-14
R	ROMACK VICTOR A	7-19-38
S	HORNER DELORSE A - LIFE	7-19-30
T	GRIBBEN M PEGGY REVOCABLE LIVING TRUST	7-19-29
U	ZELIC NICK ET UX	7-19-27
V	HORNER DELORSE A - LIFE	7-19-26
W	CHURCH OF CHRIST TRUSTEES	7-19-25
X	COLLINS BRIAN & PAMELA J	7-19-24
Y	COLLINS BRIAN & PAMELA J	7-19-23.1
Z	COLLINS BRIAN & PAMELA J	7-19-23.2
A2	DRUSCHEL JAMES F & JAMIE ANN ET AL	7-19-23
B2	CUMPSTON GAIL	7-19-20
C2	UNDERDONK ALAN	7-16-25.1
D2	FROMHART BRAD ET UX - LIFE	7-20-1
E2	BURGE JUDITH A & VIRGINIA L BAILEY ET AL	7-20-6
F2	GEHO ANNIE L EST	7-20-11
G2	BURLEY AMMON ET UX	7-20-12
H2	BURLEY AMMON	7-20-18
I2	BURLEY AMMON A	7-20-24
J2	BURLEY AMMON A	7-20-37
K2	GRESHAW JASON M & MARY L	7-25-2
L2	BROWN ANDREW C III	7-25-6
M2	HARRINGTON CLYDE F	7-25-7
N2	W VA DEPT OF COMMERCE DIV OF NATURAL RESOURCES	7-25-9
O2	CONAWAY THOMAS EARL JR & CAROLYN K STOWE	7-25-12
P2	CONAWAY THOMAS E	7-23-1
Q2	PRENDERGAST MICHAEL J & SUELLEN LEMLEY	7-23-26
R2	LONG LONNY DAVID & LINDA SUE	1-3-2.1
S2	PRENDERGAST MICHAEL J & SUE ELLEN	3-1-2
T2	WV MINERALS INC	3-1-3
U2	MCDIFFITT WILBERT (WEBB) H TRUST	3-1-35
V2	GORBY GREGORY A & CYNTHIA D	3-1-14
W2	WAYNE CARMINT REALTY	3-1-18
X2	WAYNE CARMINT REALTY LLC	3-1-19
Y2	WAYNE CARMINT REALTY LLC	3-1-20
Z2	DRAHEIM GARY W JR ETAL	3-1-9
A3	CBC HOLDINGS LLC	3-1-8.1

08/26/2022

REVISIONS:	COMPANY:		
			
	OPERATOR'S	VERNON JOHNSON WTZ	API #:
	WELL #:	601H	047-103-
	DISTRICT:	COUNTY:	STATE:
	CLAY	WETZEL	WV
			DATE: 06-13-2022
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 2

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

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

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

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

*Co-tenancy utilization - 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

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

Well Operator: SWN Production Company, LLC
By: [Signature]
Its: Senior Landman

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
1	3-1-1	Alice Driver, f/k/a Alice LeBoda, a single woman	Chesapeake Appalachia, L.L.C.	12.50%	94A/461	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Ellen Vannatter, a single woman	Chesapeake Appalachia, L.L.C.	12.50%	94A/464	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		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, LLC		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, LLC		157A/540	
2	3-1-6	James Denzil Stoneking, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	94A/470	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		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, LLC		157A/540	
		Allan Karl Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	91A/107	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Timothy Neil Draheim, a single man	Chesapeake Appalachia, L.L.C.	12.50%	91A/110	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
3	3-1-5	Steven Mark Draheim, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/686	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Gary Wayne Draheim, Sr., a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	90A/680	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		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.	SWN Production Company, LLC		157A/540	
		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.	SWN Production Company, LLC		157A/540	
		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.	SWN Production Company, LLC		157A/540	
		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.	SWN Production Company, LLC		157A/540	
		Vernon Sterling Johnson, a single man	Chesapeake Appalachia, L.L.C.	12.50%	90A/579	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
4	3-1-4	Gerald Edward Dean, a single man	Chesapeake Appalachia, L.L.C.	12.50%	91A/104	10.8333%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Royalty Owners	N/A	N/A	N/A	
		Beth Ann Barnhart, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	109A/31	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Bryan L. Gorby and Melanie C. Gorby, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/271	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Christopher M. Campbell and Cherri Campbell, his	Chesapeake Appalachia, L.L.C.	17.00%	128A/650	

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 WV Department of
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08/26/2022

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		George B. Vieweg IV	SWN Production Company, L.L.C.	17.50%	186A/495	
		Gregory A. Gorby, a/k/a Gregory Gorby and Cynthia Gorby, his wife	Chesapeake Appalachia, L.L.C.	12.50%	104A/383	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Gwendolyn J. Vieweg	SWN Production Company, LLC	17.50%	186A/503	
		James A. Campbell and Tinamarie Campbell, his wife	Chesapeake Appalachia, L.L.C.	17.00%	128A/646	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Jennifer Dvorak, married dealing in her sole and separate property	SWN Production Company, LLC	15.00%	204A/929	
		Richard Paul Murphy, by his attorney-in-fact Jo Ann W. Murphy and Jo Ann W. Murphy, his wife	Chesapeake Appalachia, L.L.C.	17.00%	128A/654	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		John Allan Moore a/k/a John A. Moore and Marcia W. Moore, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/484	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		John K. Campbell, Jr., a single man	Chesapeake Appalachia, L.L.C.	17.00%	130A/38	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Kevin R. Milliken, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	109A/120	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Lance Everett Rhodes	SWN Production Company, LLC	17.50%	186A/509	
		Lawrence T. Goodin, Douglas E. Goodin and Carol E. Goodin, Trustees of the Helen G. Dewell Trust dated May 1, 1990	SWN Production Company, LLC	15.00%	212A/835	
		Lois J. Bellaire a/k/a Lois Bellaire, a widow	SWN Production Company, LLC	17.00%	185A/17	
		Mark A. Kraus a/k/a Mark Albert Kraus, a single man	Chesapeake Appalachia, L.L.C.	17.00%	128A/553	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Melissa Campbell	SWN Production Company, LLC	17.00%	186A/505	
		Merle Donna Wright a/k/a Merle Oates a/k/a Merle Donna Oates and Norman L. Wright, her husband	SWN Production Company, LLC	14.00%	184A/407	
		Patrice Strachan, married dealing in her sole and separate property	SWN Production Company, LLC	15.00%	204A/925	
		Patricia Ann McCann a/k/a Patty McCann, a/k/a Patricia A. McCann, a single woman	Chesapeake Appalachia, L.L.C.	17.00%	127A/367	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Robert A. Petite, Jr. a/k/a Robert Petite, Jr. and Anita F. Petite, his wife	Chesapeake Appalachia, L.L.C.	12.50%	100A/858	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Ronald T. Frederickson and Jeanette Frederickson, his wife	Chesapeake Appalachia, L.L.C.	17.00%	127A/372	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Suzanne Rexroad, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	109A/29	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Silvia Phillips a/k/a Sylvia Phillips, a widow	Chesapeake Appalachia, L.L.C.	17.00%	134A/3	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Terri Barrow, a married woman dealing in her sole and separate property	SWN Production Company, LLC	15.00%	204A/776	
		William F. Vieweg a/k/a William Francis Vieweg and Susan Vieweg, his wife	SWN Production Company, LLC	17.50%	186A/507	
5	3-1-13	Cindy D. Adams and Randy G. Adams, her husband	Chesapeake Appalachia, LLC	12.50%	99A/435	0.0000%
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties		120A/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801	
		Beth Ann Barnhart, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC	15.00%	108A/789	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties		120A/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801	
		Bryan L. Gorby and Melanie C. Gorby, his wife	Chesapeake Appalachia, LLC	12.50%	100A/259	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties		120A/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801	
		Gregory A. Gorby, a/k/a Gregory Gorby and Cynthia Gorby, his wife	Chesapeake Appalachia, LLC	12.50%	104A/377	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties		120A/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801	
		Kevin Milliken, a married man dealing in his sole and separate property	Chesapeake Appalachia, LLC	15.00%	108A/568	
		Chesapeake Appalachia, L.L.C.	Statoil USA Onshore Properties		120A/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		158A/801	

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Suzanne Rexroad, a married woman dealing in her sole and separate property Chesapeake Appalachia, L.L.C. Chesapeake Appalachia, L.L.C. Statoil USA Onshore Properties Inc.	Chesapeake Appalachia, LLC Statoil USA Onshore Properties SWN Production Company, LLC SWN Production Company, LLC	15.00%	108A/791 117A/886 157A/540 158A/801	
6	3-1-12	Royalty Owners	N/A	N/A	N/A	7.5540%
		Kevin R. Milliken, a married man dealing in his sole and separate property	SWN Production Company, LLC	17.00%	277A/88	
		Beth Ann Barnhart, a married woman dealing in her sole and separate property	SWN Production Company, LLC	17.00%	277A/83	
		Suzanne Rexroad, a married woman dealing in her sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Ruth Ann Gianni a/k/a Ruth Kelly, and Robert Gianni, her husband	SWN Production Company, LLC	17.00%	268A/47	
		Daniel P. Kelly, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	268A/32	
		Bernard V. Kelly, Jr. a/k/a Bernard Kelly, and Cheryl L. Kelly	SWN Production Company, LLC	17.00%	269A/565	
		Charles William Baier, widower	SWN Production Company, LLC	17.00%	268A/69	
		Dona L. Smith, widow	SWN Production Company, LLC	17.00%	264A/158	
		Clarita V. Bash, widow	SWN Production Company, LLC	17.00%	264A/190	
		Dennis M. Connelly and Cathy L. Connelly, his wife	SWN Production Company, LLC	17.00%	264A/523	
		Timothy Allan Connelly and Lori A. W. Connelly, his wife	SWN Production Company, LLC	17.00%	264A/529	
		Margaret Daugherty, a widow	SWN Production Company, LLC	17.00%	269A/576	
		Donald K. Mason, widower	SWN Production Company, LLC	17.00%	268A/37	
		Varena A. Hollingshead, single	SWN Production Company, LLC	17.00%	267A/472	
		Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	144A/87 157A/540	
		Raymond B. Daugherty and Rheda N. Daugherty, his wife	SWN Production Company, LLC	17.00%	264A/195	
		Sarah A. Lee, f/k/a Sally Stocks, and John E. Lee, her husband	SWN Production Company, LLC	17.00%	265A/938	
		Laura L. Borick, f/k/a Laura Lee Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	265A/390	
		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	17.00%	267A/446	
		Patrick T. Stocks, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	265A/396	
		Michelle LeCroy, f/k/a Michelle L. Dolin, and James R. LeCroy, her husband	SWN Production Company, LLC	17.00%	265A/428	
		Julie Stocks f/k/a Julie Marie Handy	SWN Production Company, LLC	17.00%	265A/412	
		Mary Snead, a/k/a Mary Louise Snead, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	265A/434	
		Martha A. Frank and Ronald J. Frank, her husband	SWN Production Company, LLC	17.00%	264A/535	
		Robert W. Milliken and Sandra Milliken, his wife	SWN Production Company, LLC	17.00%	264A/137	
		Tracy Lee Howard and Mary Kathryn Howard, his wife	SWN Production Company, LLC	17.00%	270A/442	
		Robert A. Petite, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	278A/170	
		Debra Ann Piktel, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	277A/537	
		John Allan Moore, a/k/a John A. Moore, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	283A/423	
		Eric J. Moore, single	SWN Production Company, LLC	17.00%	277A/526	
		Bryan L. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	277A/93	
		Cindy Adams, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	277A/98	
		Gregory A. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	278A/182	
		Joseph M. Martini, single	SWN Production Company, LLC	17.00%	278A/187	
		Richard M. Martini, single	SWN Production Company, LLC	17.00%	277A/909	
		Clifford J. Thompson, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	283A/845	
		Dorothy A. Baier, widow	SWN Production Company, LLC	17.00%	285A/733	
		Kathleen M. Ciorra, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/419	
		Betty Jean Stanley Connelly, widow	SWN Production Company, LLC	17.00%	284A/431	
		Joanne Lynn Schricker, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/413	
		Laura Jean Mason, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/425	
		Alice Ann Wise, single	SWN Production Company, LLC	17.00%	266A/6	
		John D. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	268A/63	

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Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C. as Operator
 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Margaret McFarland Glaser, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	285A/784	
		Jeanne Strasser Geusz, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/477	
		Molly Strasser, single	SWN Production Company, LLC	17.00%	282A/537	
		Robin Strasser, single	SWN Production Company, LLC	17.00%	282A/543	
		Mark Edward Strasser	SWN Production Company, LLC	12.50%	281A/508	
		Kevin L. Strasser, single	SWN Production Company, LLC	17.00%	281A/489	
		Nancy Strasser Lehnhart, single	SWN Production Company, LLC	17.00%	283A/417	
		Timothy J. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	282A/480	
		Nicholas D. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	281A/514	
		Mary Ann Strasser, widow	SWN Production Company, LLC	17.00%	282A/525	
		Frank A. Farrell, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	285A/761	
		Bernard J. Farrell, single	SWN Production Company, LLC	17.00%	284A/443	
		Marcus E. Farrell, a married man dealing in his sole and separate property	SWN Production Company, LLC	17.00%	284A/437	
		Nancy Osborn, widow	SWN Production Company, LLC	17.00%	281A/439	
		Varena J. Farrell Kessel, single	SWN Production Company, LLC	17.00%	285A/772	
		Stephen D. Thompson, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Nancy J. Thompson, widow	SWN Production Company, LLC	17.00%	283A/833	
		Catherine B. DiFlorio, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	283A/400	
		Debra L. Phillips, single	SWN Production Company, LLC	17.00%	279A/633	
		Timothy J. Frederick and Pamela B. Frederick, a married couple	SWN Production Company, LLC	17.00%	280A/364	
		Harold R. Byrd, single	SWN Production Company, LLC	17.00%	281A/483	
		Christopher S. Byrd, single	SWN Production Company, LLC	17.00%	282A/469	
		Cathy L. Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/495	
7	3-1-11	Royalty Owners	N/A	N/A	N/A	7.3000%
		Kevin Milliken, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	261A/594	
		Robert A. Petite, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	261A/829	
		Debra Pikel, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	261A/600	
		Eric J. Moore, single	SWN Production Company, LLC	17.00%	267A/441	
		Bryan L. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	263A/831	
		Cindy Adams, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	261A/598	
		Gregory Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	261A/596	
		Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17.00%	144A/83	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Raymond B. Daugherty and Rheda N. Daugherty, his wife	SWN Production Company, LLC	17.00%	263A/315	
		Sarah A. Lee, f/k/a Sally Stocks, and John E. Lee, her husband	SWN Production Company, LLC	17.00%	265A/938	
		Michelle LeCroy, f/k/a Michelle Lee Dolin, and James R. LeCroy, her husband	SWN Production Company, LLC	17.00%	265A/428	
		Julie Stocks, f/k/a Julie Marie Handy, single	SWN Production Company, LLC	17.00%	265A/412	
		Mary Sneed, a/k/a Mary Louise Sneed married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	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	17.00%	267A/446	
		Patrick T. Stocks, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	265A/396	
		Laura L. Borick, f/k/a Laura Lee Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	265A/390	
		Robert W. Milliken and Sandra Milliken, his wife	SWN Production Company, LLC	17.00%	264A/137	
		Martha A. Frank and Ronald J. Frank, her husband	SWN Production Company, LLC	17.00%	264A/535	
		Kathleen E. Daugherty, widow	SWN Production Company, LLC	17.00%	269A/610	
		Alice Ann Wise, single	SWN Production Company, LLC	17.00%	266A/6	
		John D. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Varena A. Hollingshead, single	SWN Production Company, LLC	17.00%	267A/472	
		Donald K. Mason, widower	SWN Production Company, LLC	17.00%	261A/93	
		Margaret Daugherty, a widow	SWN Production Company, LLC	17.00%	269A/576	
		Rose Ann McGillivray and Daniel R. McGillivray, her husband	SWN Production Company, LLC	17.00%	265A/944	
		Raymond J. Daugherty and Dianna H. Daugherty, his	SWN Production Company, LLC	17.00%	261A/835	

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 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

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#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Tracy Lee Howard and Mary kathryn Howard, his wife	SWN Production Company, LLC	17.00%	261A/99	
		Beth Ann Barnhart, a married woman dealing in her sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Suzanne Rexroad, a married woman dealing in her sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		John Allan Moore a/k/a John A. Moore, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	283A/423	
		Nancy R. Daughterty, single	SWN Production Company, LLC	17.00%	Pending	
		Richard Albert Daugherty, married dealin in his sole and separate property	SWN Production Company, LLC	17.00%	285A/193	
		Thomas Summers Daugherty, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Mary Louise Gault aka Mary Lou Gault, single	SWN Production Company, LLC	17.00%	279A/639	
		John W. Daugherty and Mary Jane Daugherty, his wife	SWN Production Company, LLC	17.00%	286A/514	
		Benjamin F. Farrell, a single man	SWN Production Company, LLC	17.00%	283A/839	
		Bernard J. Farrell, single	SWN Production Company, LLC	17.00%	284A/443	
		Margaret McFarland Glaser, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	285A/784	
		Jeanne Strasser Geusz, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/477	
		Molly Strasser, single	SWN Production Company, LLC	17.00%	282A/537	
		Robin Strasser, single	SWN Production Company, LLC	17.00%	282A/543	
		Mark Edward Strasser	SWN Production Company, LLC	12.50%	281A/508	
		Kevin L. Strasser, single	SWN Production Company, LLC	17.00%	281A/489	
		Nancy Strasser Lehnhart, single	SWN Production Company, LLC	17.00%	283A/417	
		Timothy J. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	282A/480	
		Nicholas D. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	281A/514	
		Marie Ann Strasser, widow	SWN Production Company, LLC	17.00%	282A/525	
		Frank A. Farrell, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	285A/761	
		Marcus E. Farrell, a married man dealing in his sole and separate property	SWN Production Company, LLC	17.00%	284A/437	
		Nancy Osborn, widow	SWN Production Company, LLC	17.00%	281A/439	
		Varena J. Farrell Kessel, single	SWN Production Company, LLC	17.00%	285A/772	
		Kathleen M. Clorra, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/419	
		Betty Jean Stanley Connelly, widow	SWN Production Company, LLC	17.00%	284A/431	
		Joanne Lynn Schriker, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/413	
		Laura Jean Mason, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/425	
		Stephen D. Thompson, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Clifford J. Thompson, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	283A/845	
		Nancy J. Thompson, widow	SWN Production Company, LLC	17.00%	283A/833	
		Catherine B. DiFlorio, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	283A/400	
		Dorothy A. Baier, widow	SWN Production Company, LLC	17.00%	285A/733	
		Roberta A. Raymond, widow	SWN Production Company, LLC	17.00%	263A/489	
		Thomas C. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Cathy L. Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/495	
		Christopher S. Byrd, single	SWN Production Company, LLC	17.00%	282A/469	
		Harold R. Byrd, single	SWN Production Company, LLC	17.00%	281A/483	
		Timothy J. Frederick and Pamela B. Frederick, a married couple	SWN Production Company, LLC	17.00%	280A/364	
		Richard M. Martini, single	SWN Production Company, LLC	17.00%	277A/909	
		Joseph M. Martini, single	SWN Production Company, LLC	17.00%	278A/187	
8	3-1-10	Royalty Owners	N/A	N/A	N/A	21.5412%
		Alcinda Lou Fox Santonas, a/k/a Alcinda Lou Santonas, widow	SWN Production Company, LLC	17.00%	263A/305	
		Alice Ann Wise, single	SWN Production Company, LLC	17.00%	266A/6	
		Allan Karl Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	264A/216	
		Barbara J. Draheim, single	SWN Production Company, LLC	17.00%	263A/300	
		Barbara Lee Garrett and Daniel R. Garrett, her husband	SWN Production Company, LLC	17.00%	265A/402	
		Bernard V. Kelly, Jr., a/k/a Bernard Kelly, and Cheryl L. Kelly, his wife	SWN Production Company, LLC	17.00%	269A/565	
		Carolyn Davis Gorby, widow	SWN Production Company, LLC	17.00%	279A/705	
		Charles F. Barnard, single	SWN Production Company, LLC	17.00%	284A/170	
		Cathy L. Sneed, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/495	
		Church of Christ Coschocton	SWN Production Company, LLC	17.00%	282A/520	
		Charles William Baier, widower	SWN Production Company, LLC	17.00%	268A/69	

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 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Dona L. Smith, widow	SWN Production Company, LLC	17.00%	261A/113	
		Donald K. Mason, widower	SWN Production Company, LLC	17.00%	261A/93	
		Frank Wasler, single	SWN Production Company, LLC	16.00%	282A/560	
		Douglas H. Arnold and Cheryl D. Arnold, his wife	SWN Production Company, LLC	17.00%	278A/655	
		Edward Michael Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	264A/206	
		Thomas Summers Daugherty, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Richard Albert Daugherty, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	285A/193	
		Nancy R. Daugherty, single	SWN Production Company, LLC	17.00%	Pending	
		G. Joan Stockton and Robert Stockton, her husband	SWN Production Company, LLC	17.00%	261A/841	
		Gail Thomas Fox and Barbara Anne Fox, his wife	SWN Production Company, LLC	17.00%	265A/385	
		Gary Wayne Draheim, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	Pending	
		Gary Wayne Draheim, Sr., married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	263A/837	
		Bruce R. Harmon, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	286A/506	
		Hawley P. Harmon, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	284A/373	
		Gerald Elwood Dean, single	SWN Production Company, LLC	18.00%	264A/148	
		Harold R. Boyd, single	SWN Production Company, LLC	17.00%	281A/483	
		Roby H. MacDonald, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	287A/116	
		Emily K. Harmon, married	SWN Production Company, LLC	16.00%	284A/378	
		Joshua Lewis Harmon, single	SWN Production Company, LLC	17.00%	284A/368	
		Tyler Jacob Harmon, single	SWN Production Company, LLC	17.00%	283A/856	
		Bruce E. Gorby and Betty Lou Gorby, his wife	SWN Production Company, LLC	17.00%	279A/682	
		David W. Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	279A/628	
		Dwain K. Gorby and Carol L. Gorby, his wife	SWN Production Company, LLC	17.00%	281A/460	
		Melissa Ann Gorby Butler n/k/a Melissa Ann Butler, single	SWN Production Company, LLC	17.00%	279A/655	
		James D. Fox and Lori A. Fox, his wife	SWN Production Company, LLC	17.00%	264A/211	
		Andra Emarie Gorby, single	SWN Production Company, LLC	17.00%	282A/549	
		Marshall H. Gorby and Rhonda L. Gorby	SWN Production Company, LLC	17.00%	284A/333	
		John D. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Janet Clark Elliott, widow	SWN Production Company, LLC	17.00%	Pending	
		Joseph M. Martini, single	SWN Production Company, LLC	17.00%	278A/187	
		Julie Stocks, f/k/a Julie Marie Handy, single	SWN Production Company, LLC	17.00%	265A/412	
		Justin Dale Draheim, single	SWN Production Company, LLC	18.00%	263A/821	
		John W. Daugherty and Mary Jane Daugherty, his wife	SWN Production Company, LLC	17.00%	286A/514	
		Kathleen E. Daugherty, widow	SWN Production Company, LLC	17.00%	269A/610	
		Kathy A. Trommer, a/k/a Catherine Limbaugh, a/k/a Kathryn Lambaugh, widow	SWN Production Company, LLC	17.00%	269A/582	
		Kent E. Arnold and Mary Ann Arnold, his wife	SWN Production Company, LLC	17.00%	278A/203	
		Lance Edward Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	267A/462	
		Laura L. Borick, f/k/a, Laura Lee Stocks, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	265A/390	
		Louis David Williams, III, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	277A/521	
		Louis David Williams, Jr., married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	268A/58	
		Margaret Daugherty, a widow	SWN Production Company, LLC	17.00%	269A/576	
		Marilyn Jo Alhanati, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	263A/816	
		Martha A. Frank and Ronald J. Frank, her husband	SWN Production Company, LLC	17.00%	264A/535	
		Mary Louise Gault aka Mary Lou Gault, single	SWN Production Company, LLC	17.00%	279A/639	
		Mary Snead, a/k/a Mary Louise Snead, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	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	17.00%	267A/446	
		Marcie Jo Naber, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	285A/790	
		Michael A. Daugherty, a/k/a Michael Albert Daugherty, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17.00%	144A/79	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator

Vernon Johnson Wtz 601H
Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Bernard J. Farrell, a single man	Antero Resources Corporation	15.00%	193A/115	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Jeanne Strasser Geusz, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	281A/477	
		Melodie Rochelle, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	285A/745	
		Molly Strasser, single	SWN Production Company, LLC	17.00%	282A/537	
		Nancy Strasser Lehnhart, single	SWN Production Company, LLC	17.00%	283A/417	
		Nicholas D. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	281A/514	
		Kevin L. Strasser, single	SWN Production Company, LLC	17.00%	281A/489	
		Timothy J. Strasser, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	282A/480	
		Frank A. Farrell	Antero Resources Corporation	15.00%	190A/413	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Marcus E. Farrell, a married man dealing in his sole and separate property	Antero Resources Corporation	15.00%	189A/427	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Nancy Osborn, a single woman	Antero Resources Corporation	15.00%	189A/438	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Varena J. Kessel, a married woman dealing in her sole and separate property	Antero Resources Corporation	15.00%	189A/322	
		Antero Resources Corporation	SWN Production Company, LLC		272A/588	
		Raymond B. Daugherty and Rheda N. Daugherty, his wife	SWN Production Company, LLC	17.00%	263A/315	
		Raymond J. Daugherty and Dianna H. Daugherty, his wife	SWN Production Company, LLC	17.00%	261A/835	
		Rex Wilburn, widower	SWN Production Company, LLC	17.00%	261A/819	
		Richard M. Martini, single	SWN Production Company, LLC	17.00%	277A/909	
		Edward Franklin Estes, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	282A/570	
		Robert Michael Wayne Draheim, single	SWN Production Company, LLC	18.00%	266A/1	
		Robert W. Milliken and Sandra Milliken, his wife	SWN Production Company, LLC	17.00%	264A/137	
		Roberta A. Raymond, widow	SWN Production Company, LLC	17.00%	263A/489	
		Linda Sue Horton-Ray	SWN Production Company, LLC	17.00%	285A/795	
		Roscoe Village Foundation, Inc.	SWN Production Company, LLC	17.00%	282A/475	
		Rose Ann McGillivray and Daniel R. McGillivray, her husband	SWN Production Company, LLC	17.00%	265A/944	
		Roy Howard McKinney, a married man dealing in his sole and separate property	SWN Production Company, LLC	17.00%	277A/144	
		Ruth Ann Gianni, a/k/a Ruth Kelly, and Robert Gianni, her husband	SWN Production Company, LLC	17.00%	Pending	
		Sarah A. Lee, f/k/a Sally Stocks, and John E. Lee, her husband	SWN Production Company, LLC	17.00%	265A/938	
		Lynn Brockman Ellis, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/338	
		Steven Michael Gorby, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	263A/310	
		Thomas C. Wise, married dealing in his sole and separate property	SWN Production Company, LLC	17.00%	Pending	
		Timothy Allan Draheim, single	SWN Production Company, LLC	18.00%	263A/842	
		Timothy Allan Connelly and Lori A.W. Connelly, his wife	SWN Production Company, LLC	17.00%	264A/529	
		Timothy Neil Draheim, single	SWN Production Company, LLC	17.00%	263A/295	
		Tracy Lee Howard and Mary Kathryn Howard, his wife	SWN Production Company, LLC	17.00%	261A/99	
		Stephen Ford Whatley, Sr., married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	286A/498	
		Thomas Leslie Kettle, Sr. widower	SWN Production Company, LLC	17.00%	282A/565	
		Robin Linn Gorby McCaskill aka Robin Lynn Gorby McCaskill and John R. McCaskill, Jr., her husband	SWN Production Company, LLC	16.00%	283A/429	
		Robin Strasser, single	SWN Production Company, LLC	17.00%	282A/543	
		George Steven Donaghy and Kathy Lynn Donaghy, his wife	SWN Production Company, LLC	16.00%	283A/851	
		Kathleen M. Ciorra, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/419	
		Betty Jean Stanley Connelly, widow	SWN Production Company, LLC	17.00%	284A/431	
		Joanne Lynn Schricker, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/413	
		Laura Jean Mason, married dealing in her sole and separate property	SWN Production Company, LLC	17.00%	284A/425	
		Evelyn Denise Hall, single	SWN Production Company, LLC	17.00%	282A/510	
		Anita Carol Childers, widow	SWN Production Company, LLC	17.00%	282A/515	
		Caye Estes Everett	SWN Production Company, LLC	17.00%	282A/486	
		Varena A. Hollingshead, single	SWN Production Company, LLC	17.00%	267A/472	
		Vernon Sterling Johnson, single	SWN Production Company, LLC	18.00%	269A/588	
		William Leonard Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	Pending	
		William Lester Draheim, married dealing in his sole and separate property	SWN Production Company, LLC	18.00%	264A/518	

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Vernon Johnson WTZ 601H
Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Karen Sue Measley, f/k/a Karen Sue Francis Hall and Ross Edwin Measley, Jr., her husband	SWN Production Company, LLC	16.00%	200A/1	
		Lana B. Kuhl	SWN Production Company, LLC	12.50%	188A/482	
		Anna L. Buzzard	Chesapeake Appalachia, LLC	12.50%	90A/1	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		157A/540	
		Marlene Kay Musgrave and Wayne T. Musgrave, wife and husband	SWN Production Company, LLC	12.50%	202A/30	
		Max Hinerman and Loretta Hinerman, his wife	SWN Production Company, LLC	16.00%	187A/687	
		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	SWN Production Company, LLC	16.00%	199A/943	
		Thomas G. Hall, a married man dealing in his sole and separate property	SWN Production Company, LLC	16.00%	199A/938	
10	7-24-1 pt. 27	Hayhurst Company, a Florida General Partnership	Chesapeake Appalachia, L.L.C.	17.000%	723/624	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		James Edward Doull, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.500%	685/221	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Ernest N. Keller a/k/a Ernest M. Keller and Pearl H. Keller, his wife	Chesapeake Appalachia, L.L.C.	12.50%	683/390	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Robert Lee Keller and Mary Kay Keller, his wife	Chesapeake Appalachia, L.L.C.	12.50%	683/349	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Carolyn Joyce Daugherty, single	Chesapeake Appalachia, L.L.C.	12.50%	684/1	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Neva E. Keller, a widow	Chesapeake Appalachia, L.L.C.	12.50%	688/127	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Donna J. Savage, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	684/117	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
11	7-24-6	Hayhurst Company, a Florida General Partnership	Chesapeake Appalachia, L.L.C.	17.00%	708/66	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
10	7-24-1 pt. 26	Christopher G. Adams and Frica Adams, his wife	Chesapeake Appalachia, L.L.C.	17.00%	761/402	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Derrick H. Adams and Suzanne Adams, his wife	Chesapeake Appalachia, L.L.C.	17.00%	761/395	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Paul Charles Adams, a single man	Chesapeake Appalachia, L.L.C.	17.00%	750/169	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Bruce D. Bonar and Sandra C. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17.00%	751/608	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Lee D. Bonar and Bonnie M. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17.00%	747/270	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Charles W. Bonar and Charlotte L. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17.00%	755/109	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Brian Harris Bonar, Power of Attorney for Katherine L. Bonar, a widow	SWN Production Company, L.L.C.	16.00%	951/337	
		Ronald E. Bonar, a single man	Chesapeake Appalachia, L.L.C.	17.00%	754/616	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		The Estate of Richard L. Bonar, by Sandra J. Bonar, acting as Executor and Sandra J. Bonar, a widow	Chesapeake Appalachia, L.L.C.	17.00%	751/167	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		William D. Bonar and Gloria A. Bonar, his wife	Chesapeake Appalachia, L.L.C.	17.00%	746/271	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Arnell Elizabeth Bowser and Glen F. Bowser, her husband	Chesapeake Appalachia, L.L.C.	17.00%	778/28	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Cornelia C. Browne, widow	SWN Production Company, L.L.C.	16.00%	955/350	
		Clyde W. Caseman and Alicia L. Caseman, his wife	Chesapeake Appalachia, L.L.C.	17.00%	748/401	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Joseph W. Caseman and Gretchen V. Caseman, his wife	Chesapeake Appalachia, L.L.C.	17.00%	747/600	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Nelda S. Clark, widow	SWN Production Company, L.L.C.	16.00%	955/243	
		Robert Clark Adams and Charlotte A. Adams, his wife	Chesapeake Appalachia, L.L.C.	17.00%	749/622	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		David Edwards, single	SWN Production Company, L.L.C.	17.00%	1046/565	
		Richard Cunliffe Edwards, a/k/a Richard Cunliff Edwards, a widow	Chesapeake Appalachia, L.L.C.	17.00%	775/409	

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Vernon Johnson WTZ 601H
Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		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.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	768/154 33/110	
		Susan Diane Clark Neidlinger, divorced	SWN Production Company, L.L.C.	18.00%	963/70	
		Suzanne Patrick, f/k/a Suzanne Edwards, married dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	964/66	
		Dorothy Patterson, a single woman Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	777/481 33/110	
		The Mary Kathryn Ray Revocable Trust, dated December 18, 1988, by Mary Kathryn Ray, acting as Trustee Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	750/118 33/110	
		Nancy L. Rodgers, f/k/a Nancy Matthews and William I. Rodgers, her husband Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	748/527 33/110	
		Cliff Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	956/244	
		David B. Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	956/248	
		George Leroy Smith and Evelyn F. Smith, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	748/442 33/110	
		John Bernard Smith and Ethel Rose Smith, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	748/436 33/110	
		Malcolm V. Smith, Jr., a widower Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	777/487 33/110	
		Russell Lee Smith and Marybelle Smith, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	747/623 33/110	
		Donna R. Walker, a widow Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	777/475 33/110	
		Dorothy E. Wheeler, a widow Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	750/111 33/110	
		Mary T. Zito, f/k/a Mary T. Nesbitt, f/k/a Mary Bonar Nesbitt, a widow Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	764/201 33/110	
10	7-24-1 pt. 24	Christopher G. Adams and Frica Adams, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	761/402 33/110	0.0000%
		Derrick H. Adams and Suzanne Adams, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	761/395 33/110	
		Paul Charles Adams, a single man Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	750/169 33/110	
		Bruce D. Bonar and Sandra C. Bonar, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	751/608 33/110	
		Lee D. Bonar and Bonnie M. Bonar, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	747/270 33/110	
		Charles W. Bonar and Charlotte L. Bonar, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	755/109 33/110	
		Brian Harris Bonar, Power of Attorney for Katherine L. Bonar, a widow Chesapeake Appalachia, L.L.C.	SWN Production Company, L.L.C.	16.00%	951/337	
		Ronald E. Bonar, a single man Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	754/616 33/110	
		The Estate of Richard L. Bonar, by Sandra J. Bonar, acting as Executor and Sandra J. Bonar, a widow Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	751/167 33/110	
		William D. Bonar and Gloria A. Bonar, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	746/271 33/110	
		Arnell Elizabeth Bowser and Glen F. Bowser, her husband Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	778/28 33/110	
		Cornelia C. Browne, widow	SWN Production Company, L.L.C.	16.00%	955/350	
		Clyde W. Caseman and Alicia L. Caseman, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	748/401 33/110	
		Joseph W. Caseman and Gretchen V. Caseman, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	747/600 33/110	
		Nelda S. Clark, widow	SWN Production Company, L.L.C.	16.00%	955/243	

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Vernon Johnson WTZ 601H
Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
		Patricia Austin Meyer, married dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	957/589	
		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.	17.00%	768/154	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Susan Diane Clark Neidlinger, divorced	SWN Production Company, L.L.C.	18.00%	963/70	
		Suzanne Patrick, f/k/a Suzanne Edwards, married dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	964/66	
		Dorothy Patterson, a single woman	Chesapeake Appalachia, L.L.C.	17.00%	777/481	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		The Mary Kathryn Ray Revocable Trust, dated December 18, 1988, by Mary Kathryn Ray, acting as Trustee	Chesapeake Appalachia, L.L.C.	17.00%	750/118	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Nancy L. Rodgers, f/k/a Nancy Matthews and William I. Rodgers, her husband	Chesapeake Appalachia, L.L.C.	17.00%	748/527	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Cliff Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	956/244	
		David B. Sligar, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	956/248	
		George Leroy Smith and Evelyn F. Smith, his wife	Chesapeake Appalachia, L.L.C.	17.00%	748/442	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		John Bernard Smith and Ethel Rose Smith, his wife	Chesapeake Appalachia, L.L.C.	17.00%	748/436	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Malcolm V. Smith, Jr., a widower	Chesapeake Appalachia, L.L.C.	17.00%	777/487	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Russell Lee Smith and Marybelle Smith, his wife	Chesapeake Appalachia, L.L.C.	17.00%	747/623	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Donna R. Walker, a widow	Chesapeake Appalachia, L.L.C.	17.00%	777/475	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Dorothy E. Wheeler, a widow	Chesapeake Appalachia, L.L.C.	17.00%	750/111	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Mary T. Zito, f/k/a Mary T. Nesbitt, f/k/a Mary Bonar Nesbitt, a widow	Chesapeake Appalachia, L.L.C.	17.00%	764/201	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
10	7-24-1 pt. 22	Christopher Claude Baughman, a/k/a Christopher C. Baughman, a married man dealing in his sole and separate property	TH Exploration, LLC	18.00%	879/320	0.0000%
		TH Exploration, LLC	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		41/299	
		Nelson G. Baughman, III, a/k/a Nelson G. Baughman, a married man dealing in his sole and separate property	TH Exploration, LLC	18.00%	876/183	
		TH Exploration, LLC	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		41/299	
		Voncile W. Baughman, a widow	TH Exploration, LLC	18.00%	878/292	
		TH Exploration, LLC	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	TH Exploration, LLC	18.00%	874/321	
		TH Exploration, LLC	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		41/299	
		Sarah C. McLaughlin, a/k/a Sarah Cummings McLaughlin and John W. McLaughlin, Co-Trustees of the Sarah C. McLaughlin Revocable Trust	TH Exploration, LLC	18.00%	873/71	
		TH Exploration, LLC	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		41/299	
		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	18.00%	876/43	
		TH Exploration, LLC	SWN Production Company, LLC and Statoil USA Onshore Properties Inc.		41/299	
10	7-24-1 pt. 16	Harold Koontz and Margaret G. Koontz, husband and wife	The Manufacturers Light and Heat Company	12.50%	360/239	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.		662/322	

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Form, WW-6A1, by SWN Production Company, L.L.C, as Operator
 Vernon Johnson WTZ 601H
 Wetzel County, West Virginia

4710303521

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	Interest Not Leased by SWN Production Company, LLC
16	7-20-41	Onward E. Burge, Sarah L. Burge and Stephen W. Burge, Trustees of the Onward E. Burge Trust dated June 21, 2010	Chesapeake Appalachia, L.L.C.	12.50%	676/438	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Nancy B. Divita	Chesapeake Appalachia, L.L.C.	12.50%	677/51	
17	7-19-28	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	0.0000%
		James W. Whipkey, single	Chesapeake Appalachia, L.L.C.	12.50%	655/5	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		O. E. Burge, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	12.50%	654/382	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	

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SWN Production Company, LLC
1300 Fort Pierpont Dr, Ste 201
Morgantown, WV 26508
Tel: 304 884 1610
Fax: 304 471 2497
www.swn.com

June 15, 2022

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

RE: SWN's proposed New Well: Vernon Johnson WTZ 601H in Wetzel County, West Virginia, Drilling under CO 74, CO 74/2, Amos Hollow Road, Rice Ridge Road, and Burley Lane.

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 CO 74, CO 74/2, Amos Hollow Road, Rice Ridge Road, and Burley Lane. 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,

A handwritten signature in black ink, appearing to read "B. Wilson".

Bradley Wilson
Senior Landman
SWN Production Company, LLC

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The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets. **08/26/2022**

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

Date of Notice Certification: 7/12

API No. 47-000
Operator's Well No. Vernon Johnson WTZ 601H
Well Pad Name: Vernon Johnson WTZ

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>538925.611</u>
County: <u>103-Wetzel</u>	Northing: <u>4396552.596</u>
District: <u>Clay</u>	Public Road Access: <u>Rice Ridge Road</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson</u>
Watershed: <u>West Virginia Fork Fish Creek</u>	

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

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

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

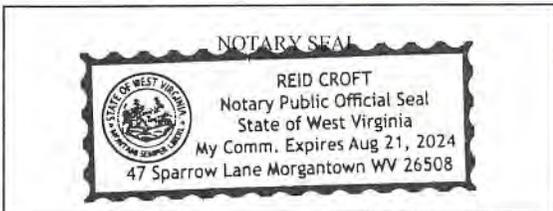
4710303521

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.

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

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

Date of Notice: 7/12 **Date Permit Application Filed:** 7/12

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: Vernon Johnson
Address: 11895 Amy Drive
La Plata, MD 20646
Name: _____
Address: _____

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

Name: _____
Address: _____
Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Reserve Coal Properties Co. Attn: Casey Saunders
Address: 275 Technology Drive
Canonsburg, PA 15317

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: TC Energy Attn: Garrett Ward
Address: Houston Office Bank of America 700 Louisiana St
Houston, TX 77002

*Please attach additional forms if necessary

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Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Office of Oil and Gas

JUL 14 2022

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

WW-6A
(8-13)

4710303521
API NO. 47-009
OPERATOR WELL NO. Vernon Johnson WTZ 601H
Well Pad Name: Vernon Johnson WTZ

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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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.

Office
JUL 14 2022
WV Dept. of Environmental Protection

WW-6A
(8-13)

4710303521
API NO. 47-009
OPERATOR WELL NO. Vernon Johnson WTZ 601H
Well Pad Name: Vernon Johnson WTZ

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 depprivacyofficer@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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Vernon Johnson Pad - Water Purveyors w/in 1500'

Sources

Landowner

Address

Vernon S. Johnson Estate/
C/O Gary W. Draheim

11895 Amy Drive, La Plata MD 26046 1 well

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

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

Date of Notice: 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

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: Vernon Johnson
 Address: 11895 Amy Drive
La Plata, MD 20646
 Name: _____
 Address: _____
 Name: _____
 Address: _____

COAL OWNER OR LESSEE

Name: Reserve Coal Properties Co. Attn: Casey Saunders
 Address: 275 Technology Drive Suite 101
Canonsburg, PA 15317-9856

MINERAL OWNER(s)

Name: AMP Fund III, LP
 Address: 225 Ross Street, Suite 201
Pittsburgh, PA 15219

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.717777, -80.545950</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rice Ridge Road</u>
District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson WTZ</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: SWN PRODUCTION COMPANY, LLC
 Telephone: 304-884-1610
 Email: brittany_woody@swn.com

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

RECEIVED
 Office of Oil and Gas
 JUL 14 2022
 WV Department of
 Environmental Protection

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08/26/2022

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

4710303521

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: Alice M. Aberegg
Address: 560 University Avenue
Elyria, OH 44035

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.717777, -80.545950</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rice Ridge Road</u>
District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson WTZ</u>

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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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08/26/2022

4710303521

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: Ellen Aberegg
Address: PO Box 33
Cameron, WV 26033

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.717777, -80.545950</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rice Ridge Road</u>
District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson WTZ</u>

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Email: brittany_woody@swn.com

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

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08/26/2022

4710303521

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

MINERAL OWNER(s)

Name: James Joseph Aberegg
Address: 905 Oberline Elyria Road Apt. W-up
Elyria, OH 44035

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.717777, -80.545950</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rice Ridge Road</u>
District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson Wtz</u>

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Notice is hereby given by:

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Telephone: 304-884-1610
Email: brittany_woody@swn.com

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

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08/26/2022

4710303521

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: Brian Franklin Butler
Address: 108 Quarter Drive
Bunkerhill, WV 25413

*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:

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District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson Wtz</u>

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Notice is hereby given by:

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Telephone: 304-884-1610
Email: brittany_woody@swn.com

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

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08/26/2022

47 10303521

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: Keith Aberegg
Address: 191 Solitude Lane
Boyce, VA 22620

*please attach additional forms if necessary

Notice is hereby given:

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State: <u>WV</u>	Approx. Latitude & Longitude: <u>39.717777, -80.546950</u>
County: <u>Wetzel</u>	Public Road Access: <u>Rice Ridge Road</u>
District: <u>Clay</u>	Watershed: <u>West Virginia Fork Fish Creek</u>
Quadrangle: <u>Littleton</u>	Generally used farm name: <u>Vernon Johnson Wtz</u>

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Email: brittany_woody@swn.com

Address: 1300 Fort Pierpont Dr., Suite 201
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08/26/2022

4710303521

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: Red Stone Resources, LLC
Address: 817 Irish Lane
Edmond, OK 73003

*please attach additional forms if necessary

Notice is hereby given:

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

State: WV
County: Wetzel
District: Clay
Quadrangle: Littleton

Approx. Latitude & Longitude: 39.717777, -80.545950
Public Road Access: Rice Ridge Road
Watershed: West Virginia Fork Fish Creek
Generally used farm name: Vernon Johnson WTZ

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:

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Telephone: 304-884-1610
Email: brittany_woody@swn.com

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

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08/26/2022

4710303521

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: James Stoneking
Address: 2600 Dewitt Drive
Fredericksburg, VA 22408

*please attach additional forms if necessary

Notice is hereby given:

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State: WV
County: Wetzel
District: Flay
Quadrangle: Littleton

Approx. Latitude & Longitude: 39.717777, -80.545950
Public Road Access: Rice Ridge Road
Watershed: West Virginia Fork Fish Creek
Generally used farm name: Vernon Johnson Wtz

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08/26/2022

4710303521

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:** 7/1/22

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: Vernon S. Johnson Estate
Address: 11895 Amy Dr.
La Plata, MD 20646

Name: _____
Address: _____

RECEIVED
Office of Oil and Gas
JUL 14 2022
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>538,925.611</u>
County:	<u>Wetzel</u>		Northing:	<u>4,396,552.596</u>
District:	<u>Clay</u>	Public Road Access:		<u>Rice Ridge</u>
Quadrangle:	<u>Littleton, WV</u>	Generally used farm name:		<u>Vernon Johnson WTZ</u>
Watershed:	<u>West Virginia Fork Fish Creek (HUC-10)</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: _____

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.



47 10303521

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

June 7, 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 Vernon Johnson Pad, Wetzel County
Vernon Johnson WTZ 601H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2011-0422 which has been issued to Southwestern Energy for access to the State Road for a well site located off Wetzel County Route 8/9 SLS MP 0.74.

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

RECEIVED
Office of Oil and Gas
JUL 14 2022
WV Department of
Environmental Protection

08/26/2022

Attachment VI Frac Additives

Product Name	Product Use	Chemical Name	CAS Number
Al-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
		Tetrakis (hydroxymethyl) phosphonium sulphate	55566-30-8
Tolcide P550A	Biocidal product	Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate groups	397256-50-7
		Hydrotreated light petroleum distillate	64742-47-8
LD-2950	Friction Reducer	Ethoxylated alcohol	Proprietary
		Poly (oxy-1,2-ethanediy)l alpha.-tridecyl-.omega.-hydroxy-, branched	69011-36-5
Legend LD-7750W	Scale Control	Methanol	67-56-1
		Phosphonic Acid Salt	Proprietary
MC MX 8-4743	Specialty Product	Sodium Nitrate	7631-99-4

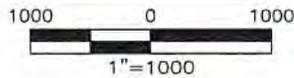
As of 1/16/2020

08/26/2022

4710303521

RECEIVED
Office of Oil and Gas
JUL 14 2022
Mississippi Department of
Environmental Protection

VERNON JOHNSON WTZ PAD CONSTRUCTION AND RECLAMATION PLAN AS-BUILT CLAY DISTRICT, WETZEL COUNTY, WV DECEMBER 2020



LOD 1

TOTAL DISTURBED AREA: 8.4 ACRES
ROAD DISTURBED AREA: 2.5 ACRES
PAD DISTURBED AREA: 5.9 ACRES

COORDINATES:
SITE ENTRANCE
 (NAD83)
 LAT: 39.722527
 LONG: 80.547716

AT JOHNSON PAD
 (NAD83)
 LAT: 39.718310
 LONG: 80.545446

CENTER OF PAD
 (NAD83)
 LAT: 39.717829
 LONG: 80.545859

GATHERING AREA
 (NAD83)
 LAT: 39.719754
 LONG: 80.544154

EXISTING WELLS:
JOHNSON WTZ 10H
 API:47-103-02714
 (NAD83)
 LAT: 39.718056
 LONG: 80.545660

JOHNSON WTZ 1H
 API:47-103-0238
 (NAD83)
 LAT: 39.717971
 LONG: 80.545746

PROPOSED WELLS:
JOHNSON WTZ 3H
 (NAD83)
 LAT: 39.718069
 LONG: 80.545741

JOHNSON WTZ 5H
 (NAD83)
 LAT: 39.718091
 LONG: 80.545721

JOHNSON WTZ 210H
 (NAD83)
 LAT: 39.718037
 LONG: 80.545684

Engineering Estimate of Quantities

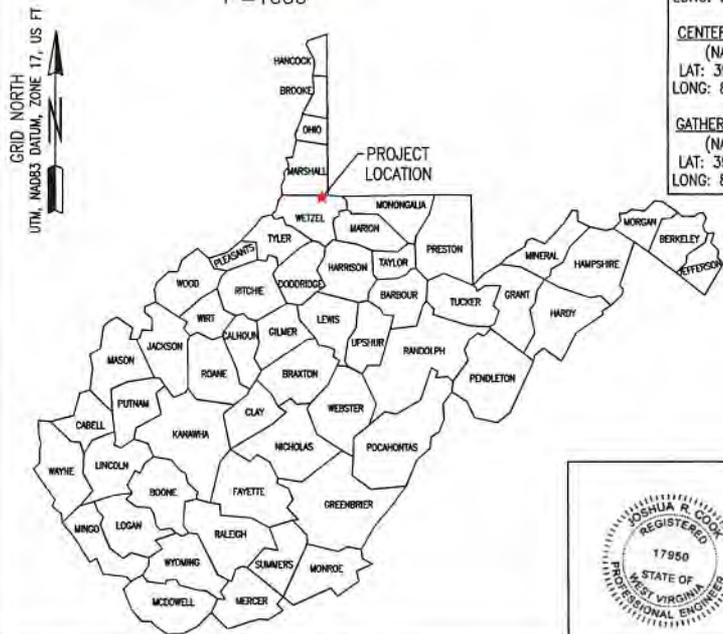
Well Site Pad Data (Drilling)	
Maintain Pad, Sumps, E&S Controls (Minimal)	1 Ea
Seed and Mulch	100 SY
Access Road (Drilling)	
Maintain Road & Ditches	1 Ea
Maintain E&S Controls	1 Ea
Well Site Pad Data (Reclamation)	
Remove Sump	2 Ea
Breach Berm	2 Ea
Discharge Channels	
Rip Rap	60 ton
or	
Erosion Control Fabric	80 SY
Spread Topsoil	4,600 CY
Seed and Mulch	6,830 SY
Reinforced Silt Fence or equivalent	1600 Ft

SHEET INDEX

- TS1. TITLE SHEET
- EP2.1 EVACUATION ROUTE/ PREVAILING WIND
- EP2.2 EVACUATION ROUTE/ PREVAILING WIND
- AS3.1 ASBUILT OVERVIEW
- AS3.2 ASBUILT
- AS3.3 ASBUILT
- AS3.4 ASBUILT
- AS3.5 ASBUILT
- ASR4.1 CONSTRUCTION AND RECLAMATION ACCESS ROAD PROFILE
- MRD5.1 RECLAMATION PLAN OVERVIEW
- MRD5.2 RECLAMATION PLAN
- MRD5.3 RECLAMATION PLAN
- MRD5.4 RECLAMATION PLAN
- MRD5.5 RECLAMATION PLAN
- MRD6.1 DETAILS
- MRD6.2 DETAILS

REVISION	DATE

WEST VIRGINIA 811
 CALL BEFORE YOU DIG! 811 or 800.245.4848
www.WV811.com



**WVDEP OOG
ACCEPTED AS-BUILT**
[Signature] 8/15/2022

[Signature]

SWN ^{R2}/_A ⁺/_V ⁺/<sub>+
 Production Company™</sub>

Jackson Surveying Inc.
TITLE SHEET
 TS.1
SOUTHWESTERN PRODUCTION COMPANY LLC.
VERNON JOHNSON WTZ PAD
CLAY DISTRICT, WETZEL COUNTY, WV
DECEMBER 01, 2020

- LEGEND -

- EDGE ACCESS ROAD
- PUBLIC/Private ROAD
- LOD
- CHAIN LINK FENCE
- BARBED WIRE FENCE
- DITCH/DRAIN
- PROPERTY LINES
- CL ACCESS ROAD
- CONTOUR MAJOR ASBUILT
- CONTOUR MINOR ASBUILT

RED TEXT INDICATES ITEMS TO BE CONSTRUCTED PRIOR TO DRILLING ACTIVITY.

REVISION	DATE

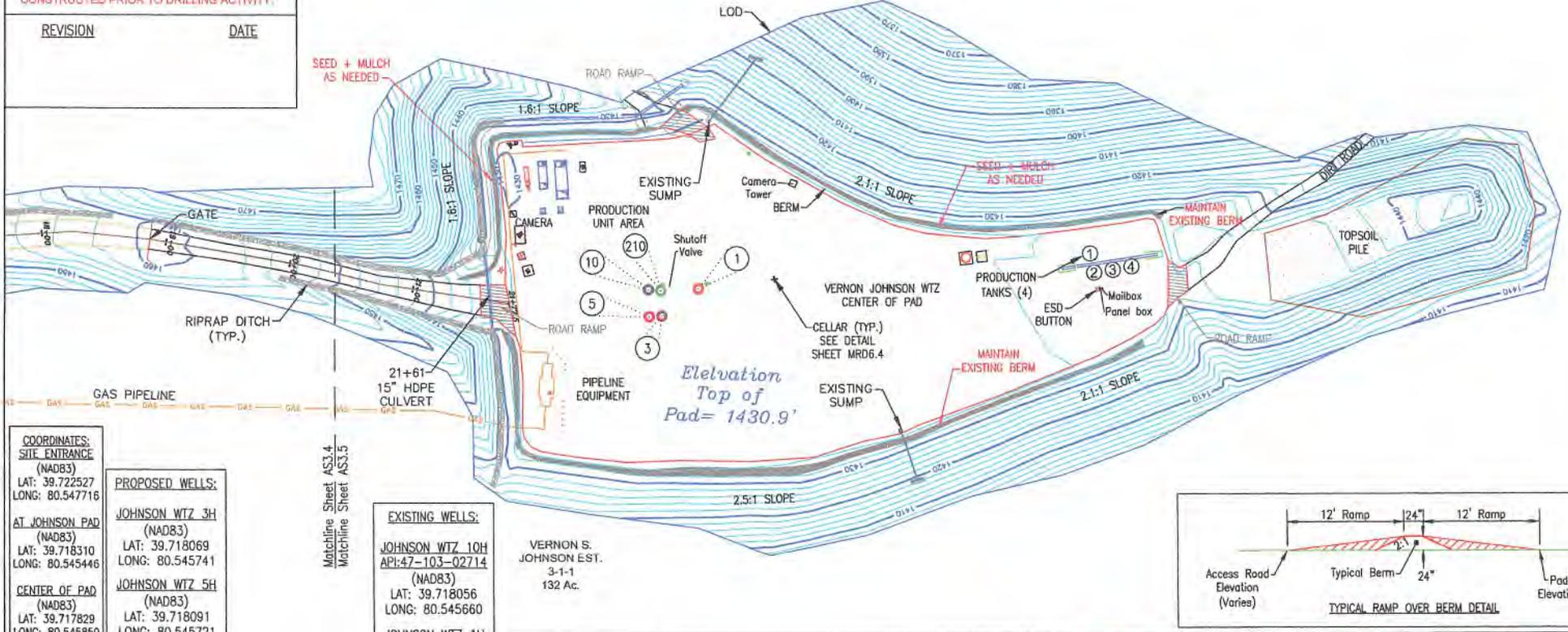
GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

**WVDEP OOG
ACCEPTED AS-BUILT**
8/15/2022

PRODUCTION TANKS (UTM METERS)

	Northing	Easting
#1	4,396,475.178	538,881.755
#2	4,396,477.322	538,877.588
#3	4,396,473.379	538,875.298
#4	4,396,469.407	538,873.132

VERNON S. JOHNSON EST.
3-1-1
132 Ac.



COORDINATES:

SITE ENTRANCE (NAD83)
LAT: 39.722527
LONG: 80.547716

AT JOHNSON PAD (NAD83)
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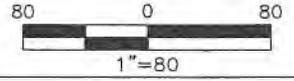
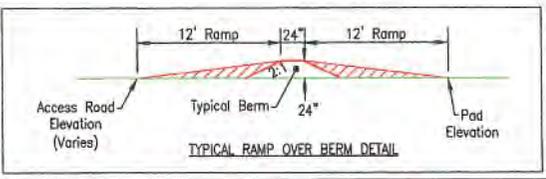
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API: 47-103-02338
LAT: 39.717971
LONG: 80.545746

VERNON S. JOHNSON EST.
3-1-1
132 Ac.



Handwritten signature

12-01-2020



Jackson Surveying Inc.
CONSTRUCTION AND RECLAMATION
ASBUILT
AS3.5
SOUTHWESTERN PRODUCTION COMPANY LLC.
VERNON JOHNSON WTZ PAD
CLAY DISTRICT, WETZEL COUNTY, WV
DECEMBER 01, 2020

2413 E. Pike St. #112
Clarksburg, Wv 26301
304-623-5851