



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, September 6, 2023  
WELL WORK PERMIT  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

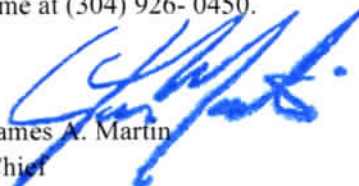
SPRING, TX 773914954

Re: Permit approval for Betty Schafer MSH 401H  
47-051-02505-00-00

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

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

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



James A. Martin  
Chief

Operator's Well Number: Betty Schafer MSH 401H  
Farm Name: Roy A Schafer Jr & Edward J S  
U.S. WELL NUMBER: 47-051-02505-00-00  
Horizontal 6A New Drill  
Date Issued: 9/6/2023

Promoting a healthy environment.

09/08/2023

# PERMIT CONDITIONS

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

## CONDITIONS

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

09/08/2023

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

1) Well Operator: SWN Production Co., LLC 494512924 051-Marshall 6-Sand 486-Moundsville  
Operator ID County District Quadrangle

2) Operator's Well Number: Betty Schafer MSH 401H Well Pad Name: Betty Schafer MSH

3) Farm Name/Surface Owner: Roy A. Schafer & Edward J. Schafer Public Road Access: Big Wheeling Creek

4) Elevation, current ground: 848.4' Elevation, proposed post-construction: 848.4'

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- 5965', Target Base TVD- 6017', Anticipated Thickness- 52', Associated Pressure- 3911

8) Proposed Total Vertical Depth: 5997'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 31314'

11) Proposed Horizontal Leg Length: 9758.56'

12) Approximate Fresh Water Strata Depths: 281'

13) Method to Determine Fresh Water Depths: Salinity calculations from Betty Schafer MSH 210H API 47-051-01777

14) Approximate Saltwater Depths: 803'

15) Approximate Coal Seam Depths: 352'

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: Ohio County Mine

Depth: 352'

Seam: Pittsburgh

Owner: American Consolidated Natural Resources

*Steve Gandy*  
*7/20/2023*

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WW-6B  
(04/15)

4705102505  
API NO. 47-051  
OPERATOR WELL NO. Betty Schafer MSH 401H  
Well Pad Name: Betty Schafer MSH

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#	136'	136'	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	375'	375'	425 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	1710'	1710'	692 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	31314'	31314'	Tail 6015sx/ 100' Inside Intermediate
Tubing							
Liners							

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	Surface	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							

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PACKERS

Kind:				
Sizes:				
Depths Set:				

*Steve Brown*  
7/20/2023

WW-6B  
(10/14)

API NO. 47- 051 -  
OPERATOR WELL NO. Betty Schafer MSH 401H  
Well Pad Name: Betty Schafer MSH

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

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 7.82

22) Area to be disturbed for well pad only, less access road (acres): 2.99

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

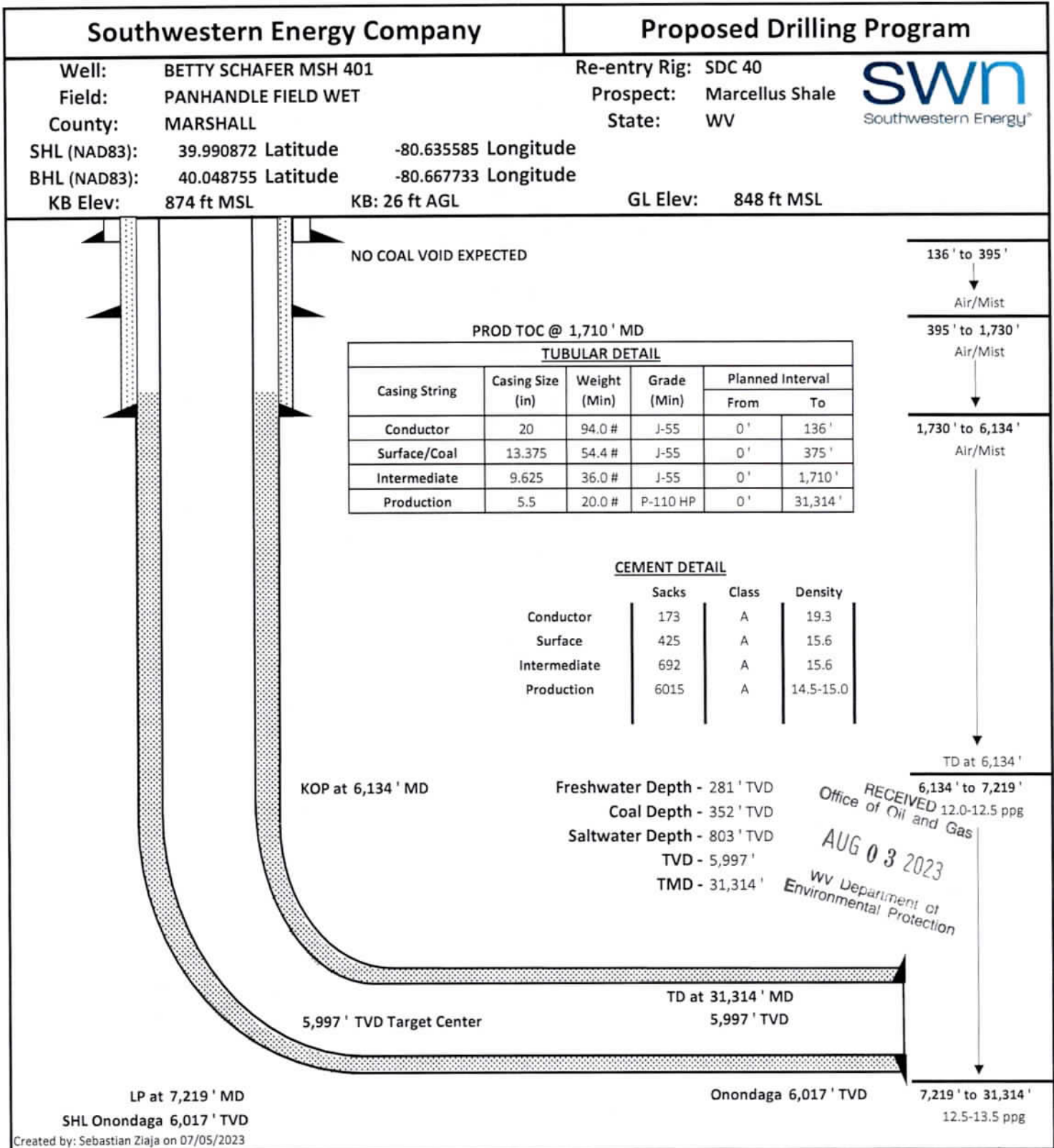
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25) Proposed borehole conditioning procedures:

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

\*Note: Attach additional sheets as needed.

4705102505



*Steve Gaud*  
7/20/2023

09/08/2023

CEMENT ADDITIVES						
INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTIER PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER)	<del>XXXXXXXXXX</del>	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-8
	S001	A-7P	0110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION	<del>XXXXXXXXXX</del>	INTEGRA SEAL	0600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-8
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
INTERMEDIATE	D020	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	0047	FP 28L	<del>XXXXXXXXXX</del>	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	<del>XXXXXXXXXX</del>	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-8
	CemNet	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	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	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	<del>XXXXXXXXXX</del>	55-#W	0880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	DO47	FP 28L	<del>XXXXXXXXXX</del>	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	OX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATICAMIDE POLYMER	PROPRIETARY
	0255	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-80-7
	<del>XXXXXXXXXX</del>	FL-66	0501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	<del>XXXXXXXXXX</del>	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	<del>XXXXXXXXXX</del>	VISCO SIFER/ANTI- SETTLING AGENT	REFINED POLYMER/ CHRYSTALLINE SILICA	PROPRIETARY
	D198	R-3	<del>XXXXXXXXXX</del>	CEMENT RETARDER	LIGNIN	8068-51-8
	SUGAR	SUGAR	CJ795	CEMENT RETARDER	SUCROSE	57-50-1
D065	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	DISPERSANT	SODIUM POLYNAPHTHALENE SULFONATE	8068-51-8	
D800	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CEMENT RETARDER (Mid-Temperature)	SODIUM LIGNOSULFONATE	8061-51-8	

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Betty Schafer MSH 401H AOR

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
051-30430	Unknown	Abandoned	***	***	Unknown	Unknown	***

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WW-9  
(4/16)

API Number 47 - 051 - 4705102505  
Operator's Well No. Betty Schafer MSH 401H

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) Wheeling Creek Quadrangle Moundsville

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 )

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Air drill to KOP with SOG from KOP to TD

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.

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

Additives to be used in drilling medium? Attachment 3B

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

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

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021

Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013, FMS 353100

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 Staff Regulatory Specialist

Subscribed and sworn before me this 22 day of June, 2023

My commission expires 6/23/2024  
Notary Public \_\_\_\_\_



4705102505

Form WW-9

Operator's Well No. Betty Schafer MSH 401H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 7.82 Prevegetation pH \_\_\_\_\_

Lime as determined by pH test min.2 Tons/acre or to correct to pH 2.99

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: [Signature]

Comments: \_\_\_\_\_

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Title: Oil & Gas Inspector Date: 7/20/2023

Field Reviewed?  Yes  No

09/08/2023

## 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 a Shale Gas Separator, 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 highly weighted 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 haul off to an approved landfill site. (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 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, SOB M)

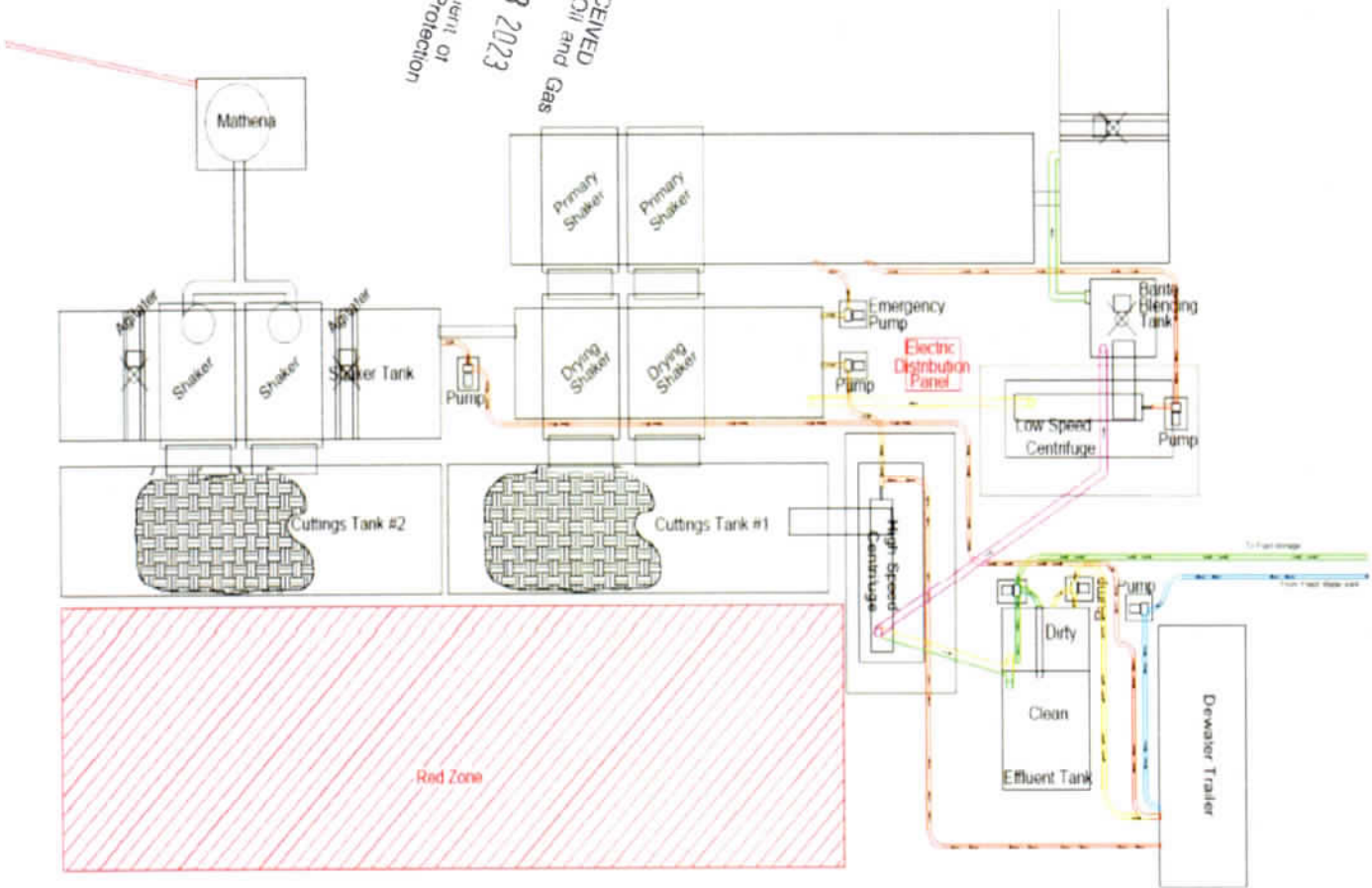
When drilling is converted to liquids drilling, the Shale Gas Separator and associated shaker tank are bypassed, and the liquids system is processed over the primary and drying shaker systems. Cuttings drop into the cuttings tank for additional processing. Any recoverable associated liquids attached 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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 AUG 03 2023

# Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM



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**Attachment 3B**  
**Drilling Mediums**

**Surface/Coal(if present)/Freshwater Intervals:**

Air

Freshwater (if needed based on conditions)

**Intermediate/Coal (if present):**

Air

**Production Hole:**

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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## WVD Seeding Specification

R<sup>+</sup>  
A → V<sup>+</sup>

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

NON-ORGANIC PROPERTIES	
Seed Mixture: ROW Mix	SWN Supplied
Orchardgrass	40%
Timothy	15%
Annual Ryegrass	15%
Brown Top Millet	5%
Red Top	5%
Medium Red Clover	5%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%
<div style="display: flex; justify-content: space-around;"> <div style="text-align: left;"> <p style="color: red; font-weight: bold;">Apply @ 100lbs per acre April 16th- Oct. 14th</p> </div> <div style="text-align: right;"> <p style="color: red; font-weight: bold;">Apply @ 200lbs per acre Oct. 15th- April 15th PLUS 50lbs per acre of Winter Wheat</p> </div> </div>	

WV Department of Environmental Protection  
 AUG 0 5 2023  
 REC'D  
 Office of Environmental Protection  
 All legumes are inoculated at 5x normal rate

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%
<div style="display: flex; justify-content: space-around;"> <div style="text-align: left;"> <p style="color: red; font-weight: bold;">Apply @ 100lbs per acre April 16th- Oct. 14th</p> </div> <div style="text-align: right;"> <p style="color: red; font-weight: bold;">Apply @ 200lbs per acre Oct. 15th- April 15th</p> </div> </div>	
Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre

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.

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%
<div style="display: flex; justify-content: space-around;"> <div style="text-align: left;"> <p style="color: red; font-weight: bold;">Apply @ 25lbs per acre April 16th- Oct. 14th</p> </div> <div style="text-align: right;"> <p style="color: red; font-weight: bold;">Apply @ 50lbs per acre Oct. 15th- April 15th</p> </div> </div>	
NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	

4705102505

# MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN

4705102505



SWN Production Company, LLC  
1300 Fort Pierpont Drive, Suite 201  
Morgantown, West Virginia 26508

**API NO. 47-XXX-XXXXX**  
**WELL NAME: Betty Schafer MSH 401H**  
**Moundsville QUAD**  
**Sand Hill DISTRICT**  
**MARSHALL COUNTY, WEST VIRGINIA**

Submitted by:

Name: Brittany Woody

*Brittany Woody*

Date: 6/15/2023

Title: Staff Regulatory Specialist

SWN Production Co., LLC

Approved by:

Name: *Steve Gannon*

Date: *7/20/2023*

Title: *Oil & Gas Inspector*

Approved by:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

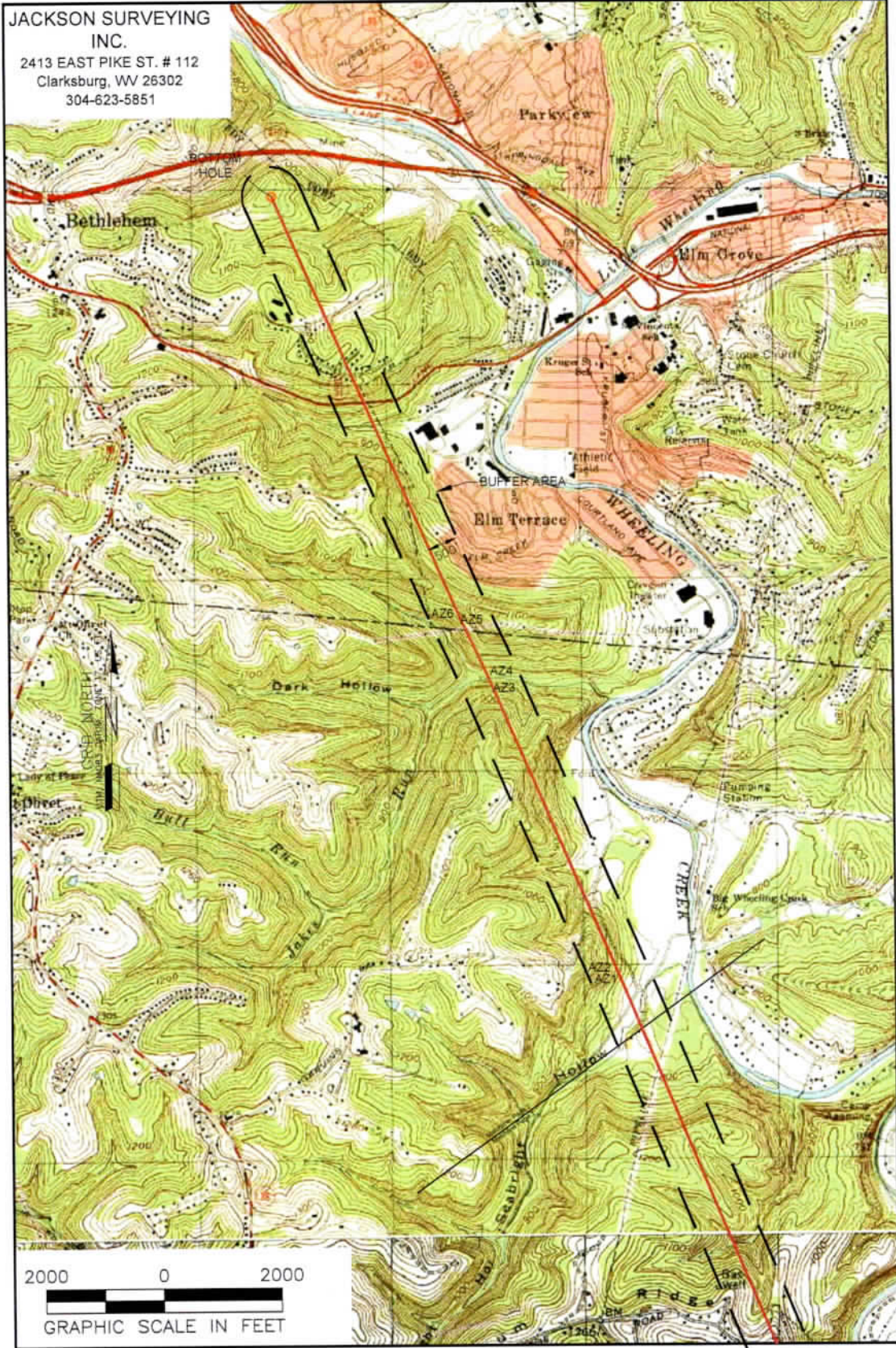
Title: \_\_\_\_\_

RECEIVED  
Office of Oil and Gas  
AUG 03 2023  
WV Department of  
Environmental Protection

SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

09/08/2023

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



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

**LEGEND:**

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

**WELL OPERATOR:**  
SWN PRODUCTION COMPANY, LLC  
**ADDRESS:**  
1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508  
**SURFACE OWNER:**  
ROY A. SCHAFER JR. & EDWARD J. SCHAFER

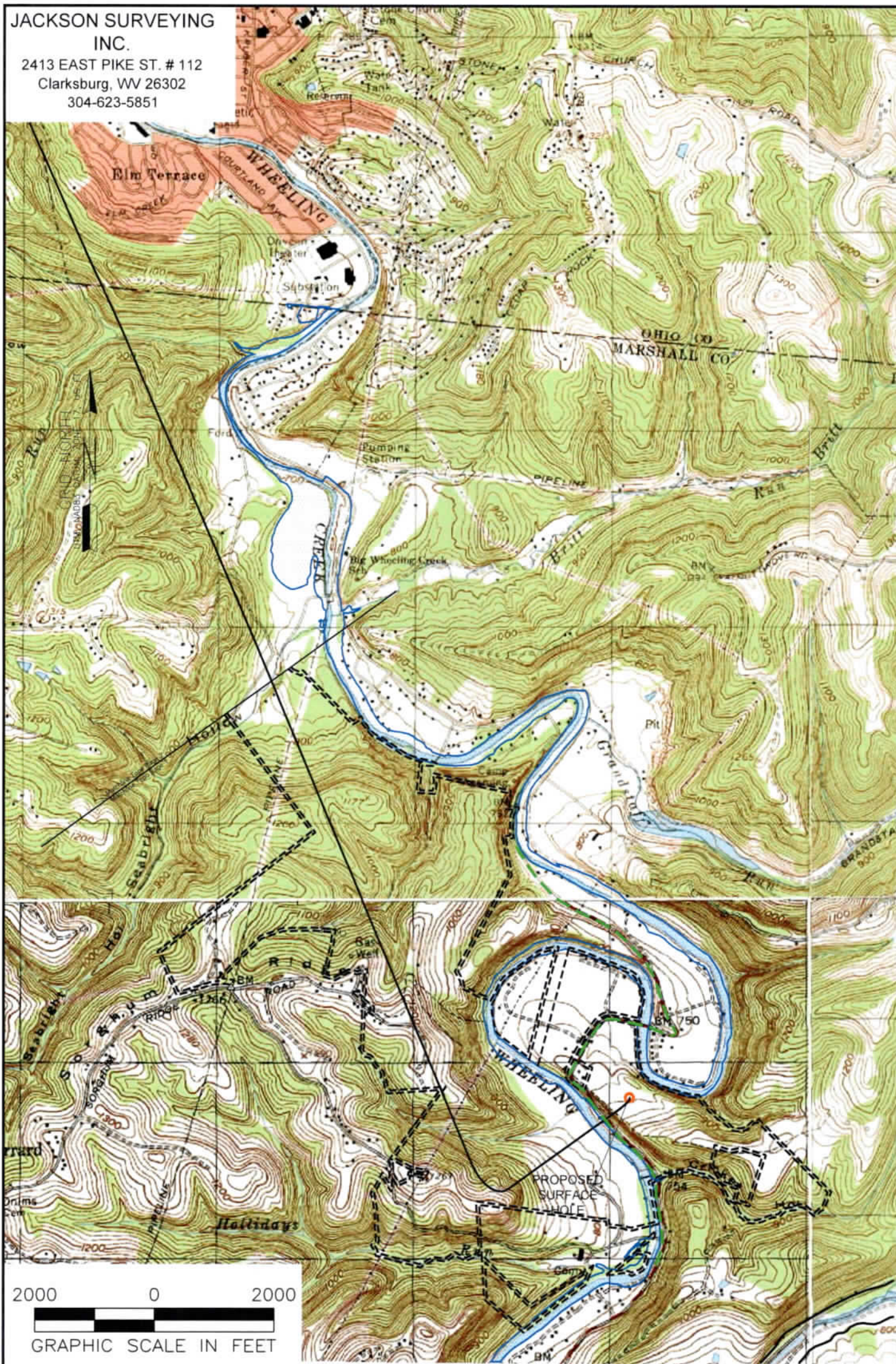
**WELL (FARM) NAME:** BETTY SCHAFER MSH  
**WELL #** 401H  
**SERIAL #**  
**COUNTY - CODE** MARSHALL - 051  
**DISTRICT:** SAND HILL  
**USGS 7 1/2 QUADRANGLE MAP NAME** MOUNDSVILLE, WV  
**API #**

RECEIVED  
Office of Oil and  
AUG 03 2023  
WV Department of  
Environmental Protection



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INC.**

2413 EAST PIKE ST. # 112  
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304-623-5851



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**LEGEND:**

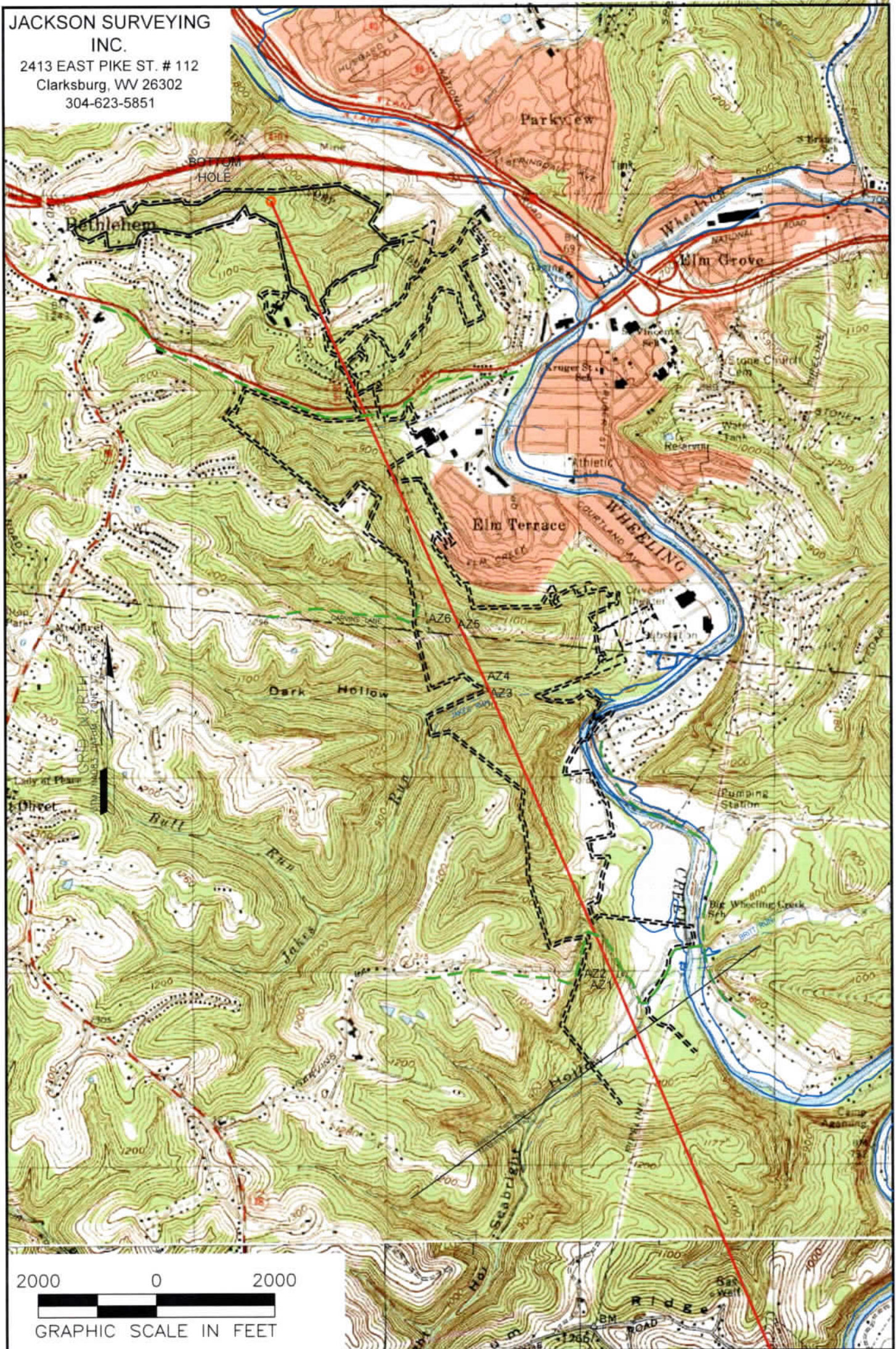
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- ✱ LPL LANDING POINT LOCATION
- FLOOD PLAIN
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

09/08/2023

<p><b>WELL OPERATOR:</b> SWN PRODUCTION COMPANY, LLC</p> <p><b>ADDRESS:</b> 1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508</p> <p><b>SURFACE OWNER:</b> ROY A. SCHAFER JR. &amp; EDWARD J. SCHAFER</p>	<p><b>WELL (FARM) NAME:</b> BETTY SCHAFER MSH</p> <p><b>WELL # SERIAL #</b> 401H</p> <p><b>COUNTY - CODE</b> MARSHALL - 051</p> <p><b>DISTRICT; SAND HILL</b></p> <p><b>USGS 7 1/2 QUADRANGLE MAP NAME</b> MOUNDSVILLE, WV</p> <p><b>API #</b></p>
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**JACKSON SURVEYING  
INC.**

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



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<b>LEGEND:</b>	PROPOSED SURFACE HOLE / BOTTOM HOLE	PUBLIC ROAD	<b>09/08/2023</b>
EXISTING / PRODUCING WELLHEAD	ACCESS ROAD TO PREV. SITE	PROPOSED PATH	
LPL LANDING POINT LOCATION	LEASE BOUNDARY		
FLOOD PLAIN			

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: BETTY SCHAFER MSH	WELL # 401H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT; SAND HILL	API #
SURFACE OWNER: ROY A. SCHAFER JR. & EDWARD J. SCHAFER	USGS 7 1/2 QUADRANGLE MAP NAME MOUNDSVILLE, WV		

Latitude: 40°00'00" SURFACE HOLE 2,966'

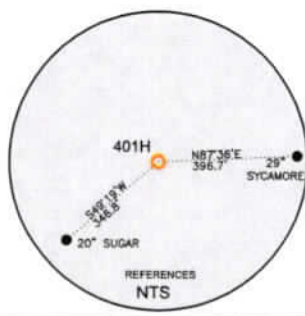
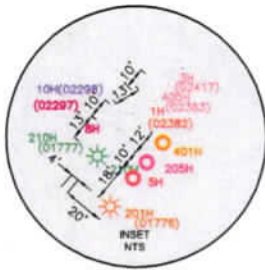
Latitude: 40°05'00"

BOTTOM HOLE 3,371'

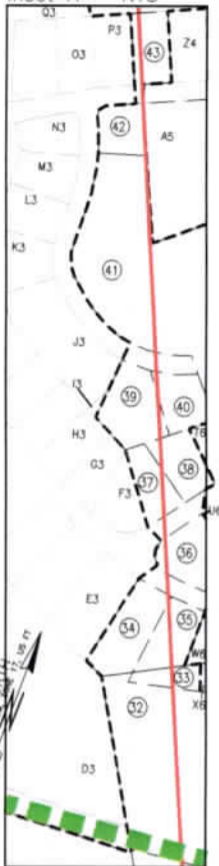
# JACKSON SURVEYING INC.

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

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



Inset A - NTS

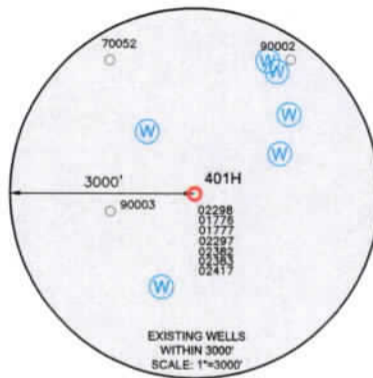


LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 72°49'27" W	814.64'	SHL TO LANDMARK	FD. 5/8" REBAR
L2	S 58°48'03" E	1,694.21'	SHL TO LANDMARK	FD. 5/8" REBAR
L4	N 22°58'13" W	33.03'	AZL1 TO AZL2	
L5	N 24°07'46" W	83.56'	AZL3 TO AZL4	
L6	N 24°22'09" W	64.08'	AZL5 TO AZL6	

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	S 67°32'17" W	2,858.60'	3,404.34'	SHL TO LPL

<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,807.663 EASTING: 531,110.560
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,474.763 EASTING: 530,305.359
<b>AZIMUTH POINT LOCATION-1 (AZL1):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,220.035 EASTING: 529,160.531
<b>AZIMUTH POINT LOCATION-2 (AZL2):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,429,229.304 EASTING: 529,156.602
<b>AZIMUTH POINT LOCATION-3 (AZL3):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,430,718.730 EASTING: 528,515.259
<b>AZIMUTH POINT LOCATION-4 (AZL4):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,430,741.974 EASTING: 528,504.847
<b>AZIMUTH POINT LOCATION-5 (AZL5):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,431,074.316 EASTING: 528,350.106
<b>AZIMUTH POINT LOCATION-6 (AZL6):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,431,092.108 EASTING: 528,342.047
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,433,217.970 EASTING: 527,405.483



### WELL RESTRICTIONS

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

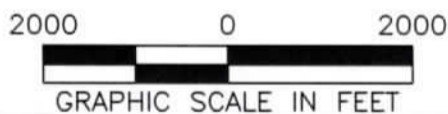
### NOTES ON SURVEY

- 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.
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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*



COMPANY: **SWN** Production Company, LLC

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

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

BETTY SCHAFER MSH  
OPERATOR'S WELL #: 401H  
API WELL #: 47 051 02505  
STATE COUNTY PERMIT

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

WATERSHED: WHEELING CREEK (HUC-10) ELEVATION: 848.4'

DISTRICT: SAND HILL COUNTY: MARSHALL QUADRANGLE: MOUNDSVILLE, WV

SURFACE OWNER: ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER ACREAGE: ±205.06

OIL & GAS ROYALTY OWNER: ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER ACREAGE: ±205.06

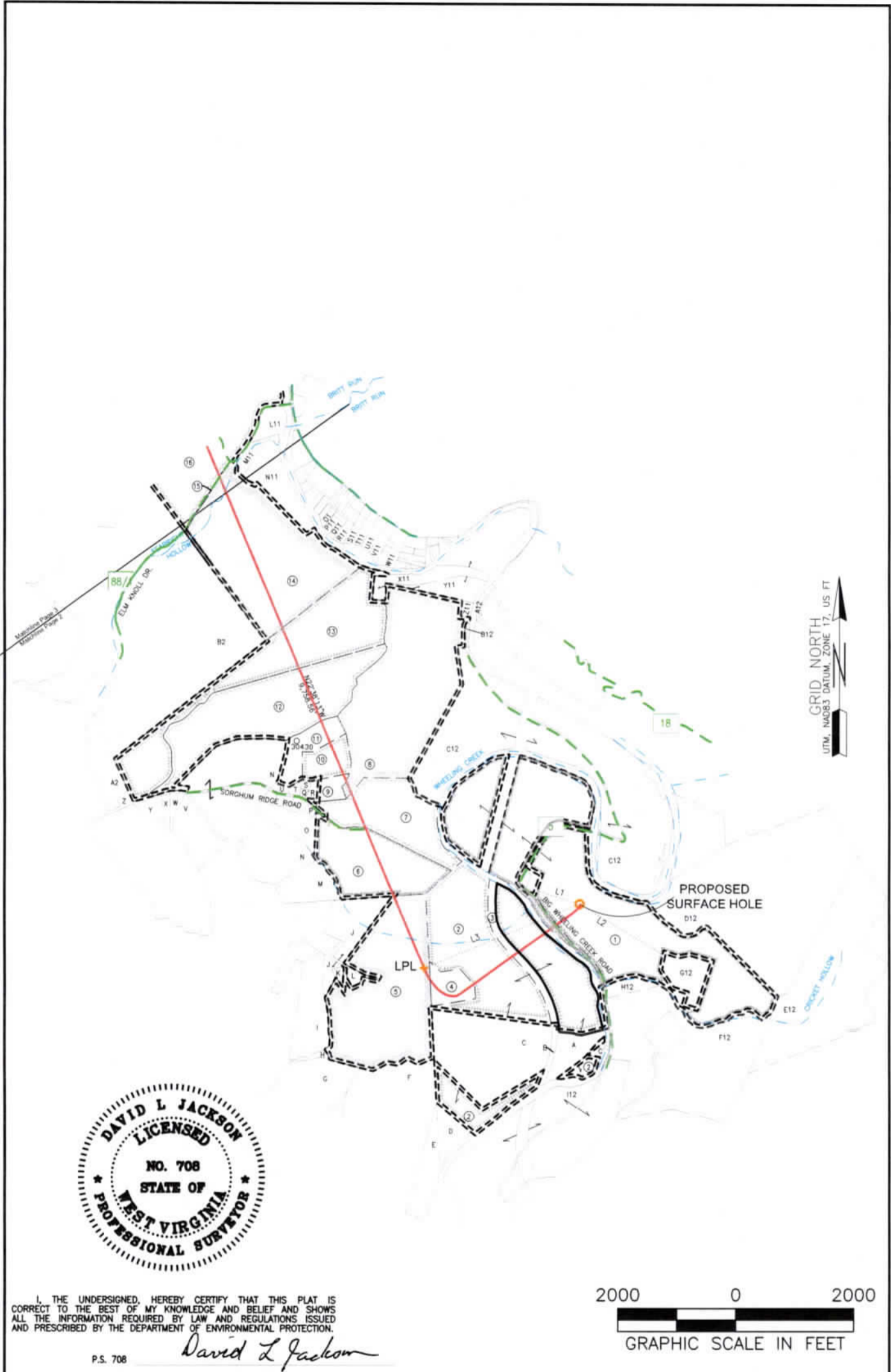
DRILL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION

CONVERT  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,997' TVD 31,314' TMD

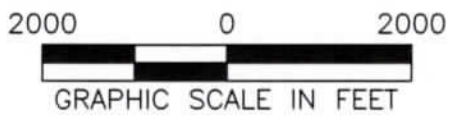
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY  
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200  
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508



LEGEND:	REVISIONS:	DATE:
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— SURVEYED BOUNDARY	07-10-2023
⊙ EXISTING / PRODUCING WELLHEAD	— DRILLING UNIT	
LPL* LANDING POINT LOCATION	== LEASE BOUNDARY	DRAWN BY: J. COCKERHAM
⊕ EXISTING WATER WELL	— PROPOSED PATH	SCALE: 1" = 2000'
⊕ EXISTING SPRING		DRAWING NO:
		WELL LOCATION PLAT

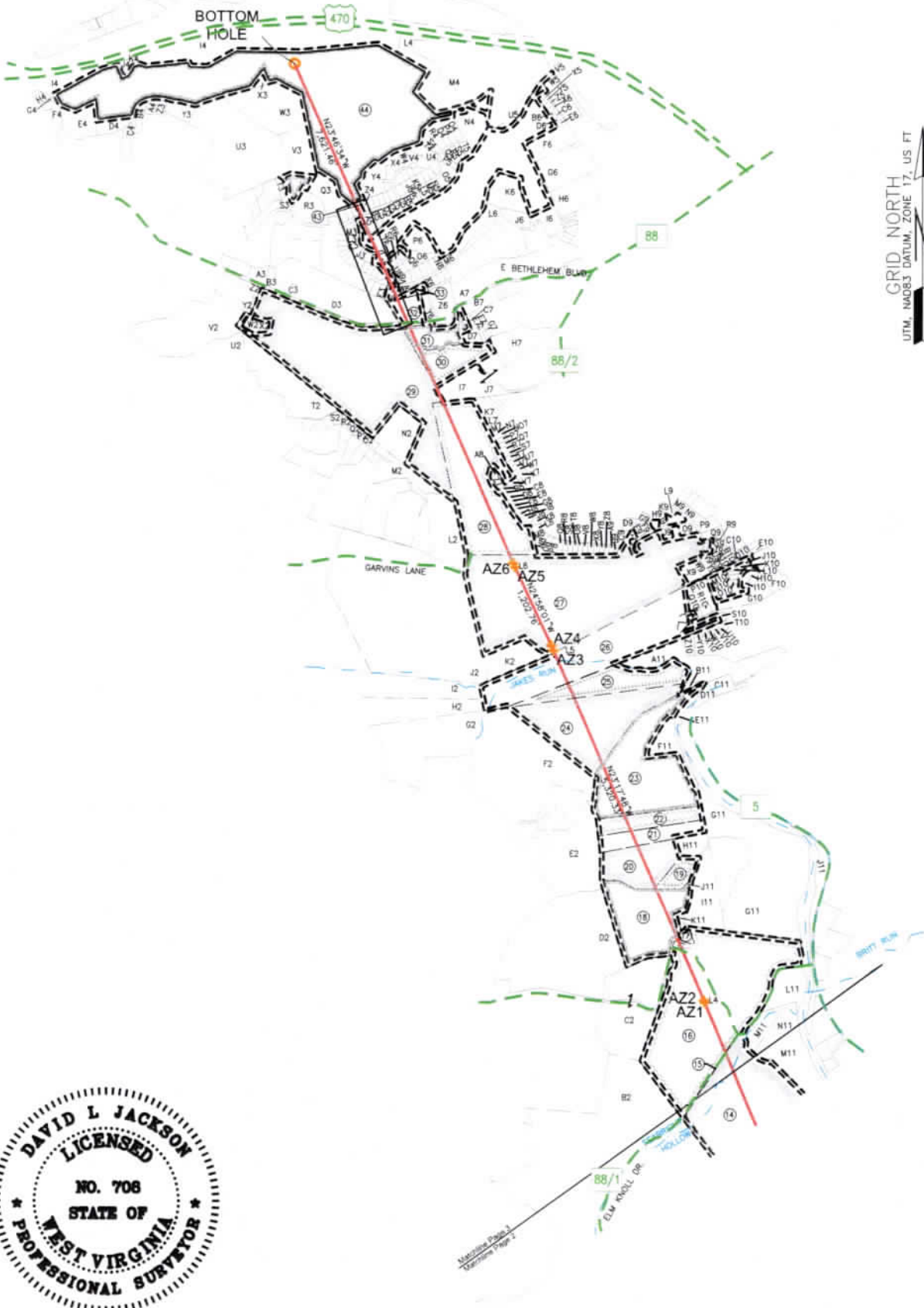


I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 708 *David L Jackson*



REVISIONS:	COMPANY:	 	
	OPERATOR'S	BETTY SCHAFER MSH	API #
	WELL #:	401H	47-051-02505
	DISTRICT:	COUNTY:	STATE:
	SAND HILL	MARSHALL	WV
			DATE: 07-10-2023
			DRAWN BY: J. COCKERHAM
			SCALE: 1" = 2000'
			DRAWING NO:
			WELL LOCATION PLAT 2



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*



REVISIONS:	COMPANY:			DATE: 07-10-2023
		OPERATOR'S	BETTY SCHAFER MSH	API #
		WELL #:	401H	47-051-02505
		DISTRICT:	SAND HILL	STATE:
		COUNTY:	MARSHALL	WV
				DRAWN BY: J. COCKERHAM
				SCALE: 1" = 2000'
				DRAWING NO:
				WELL LOCATION PLAT 3

**JACKSON SURVEYING  
INC.**



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

\* HIGHLIGHTED PARCELS ARE WITH IN 50' OF THE PLANNED  
WELLBORE AND MAY BE IMPACTED BY DRILLING ACTIVITY

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	SCHAFFER ROY A JR & SCHAFFER EDWARD J (S/R)	12-9-22
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	HOGG THOMAS G & DONN W ET AL (S)	13-8-3
3	HOGG THOMAS G & DONN W ET AL (S)	13-8-4
4	KINNEER VERNON A JR ET AL (S)	13-8-5
5	KINNEER VERNON A JR ET AL (S)	13-8-6
6	BLACK BONNIE J TRUST (S)	13-8-2
7	HART JOHN J & RENEE A (S)	13-8-2.1
8	HART JOHN J & RENEE A (S)	13-3-11
9	BLACK TERRY J (S)	13-3-12.7
10	LILLEY DEANNA BLACK & MICHAEL (S)	13-3-12.11
11	BLACK DONNA M (S)	13-3-12.12
12	BONACCI FRANK A (S)	13-3-5.5
13	BONACCI BRIAN F (S)	13-3-5.1
14	COULLING LOUISE S (S)	13-3-5
15	COULLING LOUISE S ET AL (S)	13-3-5.3
16	WHITE HORSE FARM LLC (S)	13-3-2
17	FOLMAR EDITH A TRUST (S)	13-3-1
18	GIBSON DAVID T ET UX (S)	13-2-26
19	GIBSON WILLIAM E (S)	13-2-24
20	KLUG PEGGY A (S)	13-2-27
21	GIBSON WILLIAM A (S)	13-2-28.1
22	GIBSON WILLIAM E (S)	13-2-28
23	NORRIS BRANDON C & CARLIE (S)	13-2-21.1
24	LONG RICHARD E ET UX (S)	13-2-20
25	SCHANE THOMAS L & SANDREA M (S)	13-2-19
26	PERONI CONSTRUCTION INC (S)	10-W95-112
27	C J RYAN INC (S)	10-W95-109
28	CARROLL PATRICK J & JEAN A (S)	10-W94-1.1
29	GALE JAMES ASSET MGMT LLC (S)	1-RB2-24.1
30	TEAM SLEDD LLC (S)	10-W90-46
31	BOARD OF COMM OHIO CO (S)	10-W90-52
32	MEC ENTERPRISES INC (S)	10-W90A-1
33	REYNOLDS DENNIS A & ELIZABETH D (S)	10-W90A-1.1
34	REYNOLDS DENNIS A & ELIZABETH D (S)	1-RB2J-25
35	KUTROVAC JENNIFER A & GEORGE N (S)	1-RB2J-24
36	POTTER FRANKLIN L & P A (S)	1-RB2J-33
37	KLEEH SALLY J (S)	1-RB2J-41
38	POTTS MICHAEL A & ANDREAS JENNY M (S)	1-RB2J-40
39	BOURGO JOSEPH R (S)	1-RB2J-61.3
40	BOURGO JOSEPH R (S)	1-RB2J-61.4
41	WILSON B E & S K (S)	10-W80-1.4
42	CARNEY MICHAEL A & CYNTHIA TOD (S)	1-RB2J-96
43	KOWALSKI CHESTER J & TAMA A (S)	1-RB2J-132
44	WHEELING PROPERTIES CO ADDI (S)	1-RB2-20

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
I2	SEIDLER PATRICIA L IRREVOCABLE TRUST	13-2-14.7
J2	RAHBAR AHMAD CREDIT SHELTER TRUST	13-2-102
K2	RENFORTH GEORGE III	13-2-16.2
L2	POTTS TAYLOR & POTTS KRISTIN	1-RB2-31.9
M2	POTTS JOHN W & ROSE A	1-RB2-31.2
N2	WHEELING ANTENNA CO C/O COMCAST CORPORATION	1-RB2-26
O2	DUDEK CHRISTOPHER T & GRISOLANO MEGAN E	1-RB2M-55
P2	DUDEK CHRISTOPHER T & GRISOLANO MEGAN E	1-RB2M-43
Q2	KURKO BRIAN S	1-RB2M-42
R2	BRANNAN MARK & DONNA K	1-RB2M-40
S2	HAHLE ELEANOR T (LE); GUY ROBERT D; GUY CHERYL H	1-RB2M-31.11
T2	STRAUB JOSEPH H EST; MARGARET STRAUB	1-RB2-31
U2	CONRAD JOSHUA D & TRISHA J	1-RB2-27.3
V2	CONRAD JOSHUA D & TRISHA J	1-RB2-24
W2	DLESK RICHARD J SR	1-RB2-24.2
X2	DLESK RICHARD J SR	1-RB2-24.3
Y2	DLESK ROSALIE J	1-RB2-34.4
Z2	DLESK ROSALIE J	1-RB2-34.3
A3	APEX SELF-STORAGE LLC	1-RB2-21.2
B3	APEX SELF-STORAGE LLC	1-RB2-21.4
C3	CRAIN VICTORIA P	1-RB2-22
D3	APEX SELF-STORAGE LLC	1-RB2-37
E3	MATTUCCI MARK A JR	1-RB2J-23
F3	KLEEH SALLY J	1-RB2J-42
G3	HALL BETTY JO IRREVOC TRUST	1-RB2J-43
H3	BOURGO JOSEPH R	1-RB2J-44
I3	BOURGO JOSEPH R	1-RB2J-103.1
J3	WILSON BRUCE E & SONDRRA K	1-RB2J-101
K3	ASHBROOK BRIAN K & DEBORAH A	1-RB2J-100
L3	WEISHAR JOHN J & L	1-RB2J-99
M3	TRUAX SUSAN E & DAVID B JR	1-RB2J-98
N3	TRUAX SUSAN E & DAVID B JR	1-RB2J-97
O3	BAUERLE RALPH & VICKI L	1-RB2J-20.8
P3	SEALS CARLY R & ANDREW J SR	1-RB2J-131
Q3	GHAPHERY BRIAN A; GHAPHERY CHRISTINA W	1-RB2J-20.5
R3	NERNBERG A RICHARD TRUST 1/2 INT & NERNBERG SUSAN L 1/2 INT	1-RB2J-146
S3	VILLAGE OF BETHLEHEM	1-RB2-17.4
T3	JOSEPH MICHAEL A & V J	1-RB2D-35
U3	BLEIFUS LEO A JR	1-RB2-18.1
V3	WHEELING PROPERTIES CO ADDI	1-RB2-18
W3	TAYLOR JOSEPH WILLIAM	1-RB2-19
X3	TAYLOR JOSEPH WILLIAM	1-RB1-20
Y3	BLEIFUS LEO	1-RB2C-109
Z3	BLEIFUS LEO A JR	1-RB2C-108.1
A4	SULEK DONALD L & L	1-RB2C-107
B4	KLOSS ROBERT A & DONNA J	1-RB2C-101
C4	CUCHTA BEAU	1-RB2C-100
D4	TAYLOR JOSEPH WILLIAM	1-RB2C-95
E4	BOARD OF EDUCATION	1-RB2C-94
F4	BETHLEHEM UNITED PRESBYTERIAN CHURCH TRUSTEES	1-RB2C-36
G4	PRESBYTERY OF WHEELING (SYNOD OF WV)	1-RB1Q-36
H4	SCHEHL MICHAEL A & CHRISTINA L	1-RB1Q-39
I4	WV DEPT OF TRANSPORTATION	US RT 470
J4	DIERINGER SCOT S	1-RB1Q-107.1
K4	SASEEN MARK S & ALLISON M	1-RB1-18.1
L4	CITY OF WHEELING	10-W80-1.3
M4	CITY OF WHEELING	10-W80-1.1
N4	SWIGER JUSTIN A & STEPHANIE M	1-RB3-14
O4	MORRIS JAY R & TINA M	1-RB3-13
P4	RAMSEY BRYAN S & MICHELE A	1-RB3-7
Q4	BAYHA DEBORAH S	1-RB3-6
R4	RAMOS SCOTT B & RAMOS AMY D	1-RB3-5
S4	BAKER MARK J & DAYNA M	1-RB3-4.1
T4	WARMAN JAMES J & CARRIE REDD	1-RB3-4
U4	WARMAN JAMES J & CARRIE REDD	1-RB3-3
V4	CORNELL CHARLES D & LINDA J	1-RB2J-152
W4	POLSINELLI FRANK & POLSINELLI KIMBERLY A - TOD	1-RB2J-151
X4	BREIDING DORENE	1-RB2J-149
Y4	CHAMBERLAIN DONALD	1-RB2-20.4
Z4	TENNANT DORIS JEAN - TOD	1-RB2J-134
A5	CHEN SHUXIANG & ZHENG SUI	1-RB2J-111
B5	DIMMICK DANIEL S & SUSAN M	1-RB2J-113
C5	FORNEY RANDY L & REBECCA S	1-RB2J-114
D5	COTTON DEREK A	1-RB2J-115
E5	PARISI VINCENT J & N E	1-RB2J-116
F5	MATESIC CHERI L	1-RB2J-117
G5	JOHNSTON DAVID W & DIANA	1-RB2J-118
H5	BISHOP TIMOTHY R & STACY M	1-RB2J-119
I5	DUNLEY ROBERT WILLIAM II & SHERRI	1-RB2J-120
J5	DUNLEY ROBERT WILLIAM II & SHERRI	1-RB2J-121

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	OHIO COUNTY COAL RESOURCES INC	13-8-3.2
B	OHIO COUNTY COAL RESOURCES INC	13-8-4.1
C	CONSOLIDATION COAL COMPANY	12-10-1.3
D	DEBOLT JANICE	13-9-1
E	OHIO COUNTY COAL RESOURCES INC	13-8-3.1
F	CUNNINGHAM GEORGE A	13-9-3
G	ROCKY PEARL FARM LLC	13-9-6
H	CONNER AMBER D & HANES DAVID JR	13-8-12
I	KINNEER JAMIE ET UX	13-8-7.9
J	KINNEER VERNON A JR ET AL	13-8-7
K	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	13-8-6.1
L	KINNEER JAMIE ET UX	13-8-6.2
M	ROUSH MATTHEW G	13-8-34
N	LOY EUGENE EST ET AL	13-8-1
O	BLACK BONNIE J TRUST	13-3-12
P	BLACK BONNIE J TRUST	13-3-12.2
Q	LILLEY DEANNA KAY BLACK ET VIR	13-3-12.6
R	BLACK TERRY J	13-3-12.8
S	LILLEY DEANNA K & MICHAEL C	13-3-12.3
T	BLACK MILDRED LOUISE - TOD	13-3-12.5
U	BLACK DONNA M	13-3-12.1
V	FUNK CHARLES D ET UX	13-8-32
W	KOSTELECKSKY JOSEPH J JR & CAROLYN	13-8-31.1
X	SOUTH CHRISTOPHER C	13-8-31
Y	NARRISH KEVIN	13-8-30
Z	SAMPSON EDITH VIRGINIA EST	13-7-19
A2	ALEXANDER LORRAINE	13-7-18
B2	COULLING LOUISE S ET AL	13-3-3
C2	ISER RONALD J ET UX	13-2-88
D2	WILLIS CHARLES ROBERT ET AL	13-2-29
E2	LONG RICHARD E ET UX	13-2-34
F2	LONG RICHARD E ET UX	13-2-35
G2	LAUTER FRANK ET AL	13-2-36
H2	SEIDLER E DALE JR	13-2-14.9

REVISIONS:	COMPANY:	09/08/2023	
			
	OPERATOR'S	BETTY SCHAFFER MSH	API #
	WELL #:	401H	47-051-02506
	DISTRICT:	SAND HILL	STATE:
		COUNTY:	WV
			DATE: 07-10-2023
			DRAWN BY: J. COCKERHAM
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 4



**JACKSON SURVEYING  
INC.**

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

\* HIGHLIGHTED PARCELS ARE WITH IN 50' OF THE PLANNED  
WELLBORE AND MAY BE IMPACTED BY DRILLING ACTIVITY

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
M5	BELTRONDO ASHLEY L & MATTHEW D	1-RB2J-123
N5	BELTRONDO ASHLEY L & MATTHEW D	1-RB2J-124
O5	VERNON ERIC G & JILL D - TOD	1-RB3-12
P5	MIEHLE FAMILY REVOCABLE LIVING TRUST	1-RB3-11
Q5	STERLING TERRY A & KAREN L	1-RB3-30
R5	GARLOCH COURTNEY M	1-RB3-9
S5	WILSON BRADLEY M & MALLORY M	1-RB3-8
T5	TSIKOURIS JAMES & SHELLY	1-RB3-15
U5	CITY OF WHEELING	10-W80-1.2
V5	MASON TERENCE L	10-W81-10.1
W5	MASON TERRY	10-W81-1
X5	BERKAT PROPERTIES LLC	10-W81-2
Y5	JENKINS ROBIN L	10-W81-2.1
Z5	SMOOT RICHARD E & ANGELA J	10-W81-3
A6	HUNTINGTON SUSAN	10-W81-4
B6	SMITH STEVEN & LINDA P	10-W81-5
C6	SAYTOR JOHN FJR	10-W81-6
D6	JEHOVAH WITNESSES OF WHEELING CONGREGATION TRUSTEES	10-W81-7
E6	JEHOVAH WITNESSES OF WHEELING CONGREGATION TRUSTEES	10-W81-8
F6	JEHOVAH WITNESSES OF WHEELING CONGREGATION TRUSTEES	10-W81-9
G6	WHEELING HOUSING AUTHORITY	10-W81-9.1
H6	WHEELING HOUSING AUTHORITY	10-W81-9.3
I6	MAXWELL CONSTRUCTION LLC	10-W86-416
J6	WILSON DONALD M & DANI J	1-RB3-1.7
K6	HUNTER GREGORY W & DEBORA L	1-RB3-1.1
L6	DHAHIR HAITHAM JAWAD SHAYMAA	1-RB3-1.9
M6	SMITH DIANNA M	1-RB3-1.12
N6	HINTON DONALD L & N J	1-RB2J-60
O6	TURANI WILL A & TRACEY S	1-RB2J-61.2
P6	WILSON CHRISTOPHER M & ERICA M	1-W80-1.5
Q6	ROTH BRIAN P & TRISHA R	1-RB2J-61.1
R6	HOFFMAN GARY L & P A	1-RB2J-37
S6	KOVALCHIE JOHN S III & C K	1-RB2J-38
T6	BARR MELISSA M	1-RB2J-39
U6	DZINGELESKI ELIZABETH ANN - TOD	1-RB2J-34
V6	MATTER JENNIFER R	1-RB2J-32
W6	DUFFY LAURINDA JEAN	1-RB2J-26
X6	DUFFY LAURINDA JEAN	10-W90A-1.2
Y6	JNK PROPERTIES	10-W90A-2
Z6	SCHIFFER THOMAS	10-W90A-3
A7	MEC ENTERPRISES	10-W90A-4
B7	BOARD OF COMMERCE OHIO COUNTY	10-W90A-8
C7	UNKNOWN OWNER	10-W90A-9
D7	PIAZZA BARBARA L - TOD	10-W90-53
E7	PIAZZA BARBARA L - TOD	10-W90-54
F7	GOMEZ RAYMOND L & JENNIFER L	10-W90-55
G7	GOMEZ RAYMOND L & JENNIFER L	10-W90A-35
H7	TEAM SLEDD LLC	10-W90-49
I7	TEAM SLEDD LLC	10-W90-47
J7	TEAM SLEDD LLC	10-W90-50
K7	EDWARDS TERRY L & CHRYSAL A	10-W90-31
L7	KOEGLER TODD M & B J	10-W90-32
M7	SYRYLO GARY L & C M	10-W90-33
N7	PREZELENSKI JOHN & B	10-W90-34.1
O7	PREZELENSKI JOHN & B	10-W90-35
P7	DUVALL SANDRA K	10-W90-36
Q7	ABPLANALP HARRY A JR & M	10-W90-37
R7	BAKER GINA M ET AL	10-W90-38
S7	JEFFERSON JAMES A & ZATAWSKI AMI	10-W90-39
T7	CURTIS LINDA W	10-W90-40
U7	KOUSKI THOMAS & RONDALYNN -RTO FRANCIS KRISTIN & B T KOUSKI	10-W90-41
V7	EBERLING BERNARD J	10-W90-42
W7	SCHWERTFEGER CODY & KATHERINE	10-W94-16
X7	DESANTIS MATTHEW JAMES	10-W94-17
Y7	LLOYD PATRICK R & SARAH E	10-W94-15
Z7	BROSSMAN MARK C	10-W94-1
A8	BROSSMAN MARK C	10-W94-1.3
B8	DEWITT ALEC MICHAEL & LAKEN M	10-W94-2
C8	EHLER C EDWARD & SHAREN K	10-W94-3
D8	GAUS GARY M & KARLA S	10-W94-4
E8	MUDGE RONALD A JR & G C	10-W94-5
F8	BASILONE FRANK J & K L	10-W94-6
G8	MATTHEWS DORLA	10-W94-7
H8	DEFILIPPO NANCE	10-W94-8
I8	SCHMITT JAMES H & J L	10-W94-9
J8	PARLEE MARK B	10-W95-146
K8	MOWDER KRISTEN L	10-W95-147
L8	CARNEY TAMMY LYNN - TOD	10-W95-148
M8	KRAJEWSKI FAMILY IRREV TRUST, KRAJEWSKI LEO J TRUSTEE	10-W95-149
N8	FARRELL STEPHEN V & CHRISTINE	10-W95-150



ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
O8	LEFTWICH NEIL & MCFARLAND JUDY	10-W95-151
P8	RALBOVSKY VICKI L, NICHERSON BRIAN	10-W95-152
Q8	TROSCHE JUDITH S	10-W95-153
R8	DUKE MICHAEL S	10-W95-154
S8	HUGHES VICTORIA R	10-W95-155
T8	REMIAS WILLIAM P JR & REMIAS MARY F - TOD	10-W95-156
U8	ROBINSON MACIE	10-W95-157
V8	EBARB JANICE L	10-W95-158
W8	PALMER JAMES J & STACIE B	10-W95-159
X8	SIEBER MICHAEL G & MARY C/O SIEBER MARY C	10-W95-160
Y8	TICICH JOSEPH B & JOHNSTON W L	10-W95-161
Z8	GIERRIERO ROSEMARY E	10-W95-162
A9	LEE ROBIN M	10-W95-163
B9	ICE CHARLES & ARIA D	10-W95-164
C9	SMITH BRANDON T	10-W95-168
D9	PELUCETTE PAUL M & MEGHAN E HORAN	10-W95-194
E9	TRUAX LEE D & CLUNE TARA S	10-W95-109.1
F9	ZAMBITO ALFONSO J	10-W95-109.7
G9	SMITH DAVID & DIANE IRR TRST SMITH DAVID L & DIANE K TEES	10-W95-109.8
H9	C J RYAN INC	10-W95-109.6
I9	MATYSKIELA ERIC & KRISTNA	10-W95-109.11
J9	SALEM THOMAS & PAULINE	10-W95-109.14
K9	NEVERLY RAYMOND J & MELANIE B	10-W95-109.4
L9	GALARDI DIANE T	10-W95-109.3
M9	CONTRAGUERRO R C & J A	10-W95-109.10
N9	CONTRAGUERRO ROBERT C SR JODY A	10-W95-109.13
O9	WHARTON PETER R ET AL	10-W95-109.15
P9	GUMP RENTALS LLC	10-W95-220
Q9	GUMP RENTALS LLC	10-W95-219
R9	BUTTS RONALD M & TINA M	10-W95-219.1
S9	BUTTS RONALD M & TINA M	10-W95-218
T9	BUTTS RONALD M & TINA M	10-W95-217
U9	SHELEK DONALD W & CHRISTY L	10-W95-216
V9	DUNLEVY RICHARD B & JENNIFER L	10-W95-215
W9	WILSON CHERYL B	10-W95-214
X9	WILSON CHERYL B	10-W95-221
Y9	BONACCI BRIAN F	10-W95-213
Z9	DIETRICH THOMAS V & JUDITH L	10-W95-212
A10	RYAN C J INC	10-W95-211
B10	JOHNSON DANIEL J & JAMIE L	10-W95-210
C10	SMALL LAND HOLDINGS CO	10-W95-210.1
D10	DEI TODD D & STACIE L	10-W95-209
E10	MUSSER NATHAN M & AMBER L	10-W96-31
F10	CARDINAL HEALTH 110 LLC	10-W96-39.1
G10	WOKCİK STEPHEN E III & CRISTI	10-W96-41
H10	ROBRECHT RICHARD M & SUSAN L	10-W95-112.7
I10	PEKUNSKY CAROLINE B	10-W96-42
J10	BENTZ CHAD EDWARD & AMBER LYNN	10-W95-112.1
K10	WHEELER CHARLES S D & DENISE M	10-W95-112.4
L10	PERONI CONSTRUCTION INC	10-W95-111.1
M10	PERONI CONSTRUCTION INC	10-W95-111
N10	PERONI LOUIS D & ELLEE M	10-W95-112.3
O10	PERONI CONSTRUCTION INC	10-W96-39.2
P10	ROBRECHT RICHARD M & SUSAN L	10-W95-112.8
Q10	DOUGHERTY CHERYL L	10-W95-112.5
R10	VANAMAN ROBERT M & VICKI L	10-W95-112.6
S10	GILLESPIE DANIEL L & STEPHANIE H	10-W96-39.7
T10	WEBB DAVID & KATELYNN	16-2CC-39
U10	BENNETT NEIL & LISA	16-2CC-38
V10	MEGALE WILLIAM B	16-2CC-37
W10	LAW CRYSTAL A & IVAN T	16-2CC-36
X10	TUEL JAMES E & LINDA	16-2CC-35
Y10	NARRISH ROBERT A	16-2CC-34
Z10	EVANS LUTHER & LYNN M	16-2CC-33
A11	PERONI CONSTRUCTION INC	13-2-17
B11	HOLDREN BARBARA	13-2-18
C11	HART BARBARA D	16-1-12
D11	TENNANT CALEB & AMANDA	16-1-7
E11	RENTSCHLER FREDERICK W JR & PARKER LYNETTE M	16-1-1
F11	GARVIN JOHN P & DOUGHERTY BRETT M	13-2-21
G11	COVENANT COMMUNITY CHURCH TRUSTEES	13-2-22
H11	KLUG PEGGY A	13-2-27.1
I11	GARVIN JOHN A	13-2-23
J11	CLARK JOHN C	13-2-25
K11	GIBSON DAVID T ET UX	13-2-24.1
L11	WHITE HORSE FARM LLC	13-3-6
M11	HUGHES SEAN B	13-3-5.4
N11	HUGHES HEIDI SCHENK	13-3-5.2
O11	URACO MARK A & MARY D	12-1B-14
P11	MILLER HAROLD H - TOD	12-1B-15
Q11	VILLANOVA WILLIAM & BETTY	12-1B-19

REVISIONS:	COMPANY:	09/08/2023	
			
	OPERATOR'S	BETTY SCHAFFER MSH	API #
	WELL #:	401H	47-051-01506
	DISTRICT:	SAND HILL	COUNTY:
			MARSHALL
			STATE:
			WV
			DATE: 07-10-2023
			DRAWN BY: J. COCKERHAM
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 5

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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
R11	VILLANOVA WILLIAM & BETTY	12-1B-20
S11	CARPENTER MELISSA A & RANDAL L	12-1B-21.3
T11	BENNINGTON LEA & JAMES R	12-1B-21.4
U11	MARTIN BRIAN	12-1B-21
V11	DAWSON THOMAS A ET AL	12-1B-21.1
W11	MCADAMS ROBERT E & JODY L	12-1B-27.1
X11	MAAS BRIAN J & AMY C - TRUST	13-3-8
Y11	MAAS BRIAN J & AMY C - TRUST	13-3-10
Z11	MAAS BRIAN J & AMY C - TRUST	13-3-9
A12	STRONG GREGORY S & LOUISE M	12-9-2
B12	HART JOHN J & RENEE A	13-3-11
C12	GRAY JOHN ALVIN	13-3-14
D12	FISHER CHARLES B & CARLA S	12-9-20
E12	MERINAR CALVIN C - LIFE	12-9-19
F12	FISH PATRICIA A & FREDERICK W	12-10-1.2
G12	OHIO COUNTY COAL RESOURCES INC	12-9-22
H12	ROMAN EUGENE H	12-10-1
I12	MEADOW LAKE CLUB CO	12-10-2

\* HIGHLIGHTED PARCELS ARE WITH IN 50' OF THE PLANNED WELLBORE AND MAY BE IMPACTED BY DRILLING ACTIVITY

REVISIONS:	COMPANY:	 		DATE: 07-10-2023
	OPERATOR'S	BETTY SCHAFER MSH	47-051-01565	DRAWN BY: J. COCKERHAM
	WELL #:	401H		SCALE: N/A
	DISTRICT:	SAND HILL	COUNTY:	MARSHALL
			STATE:	WV
				DRAWING NO:
				WELL LOCATION PLAT 6



WW-6A1  
(5/13)

Operator's Well No. BETTY SCHAFER MSH 401H

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

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

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

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

See Exhibit "A"

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AUG 28 2023

WV Department of  
Environmental Protection

\*Potentially Impacted Parcels - Parcels that may be impacted during drilling.

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

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

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

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

Well Operator: SWN Production Company, LLC

By: *Archie M. Smith*

Its: Rotational Landman

EXHIBIT "A"

Betty Schafer MSH 401H

Marshall and Ohio Counties, West Virginia

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

Tract #	Tax Parcel	Lease Number	Lessor	Lessee	Royalty	Book/Page	% Interest Not Leased by SWN
1	12-9-22	733731/000	Betty Jane Schafer, a widow (Life Estate Interest); Roy Alvin Schafer (Remainderman); and Edward J. Schafer (Remainderman)	TriEnergy Holdings, LLC	18.00%	722/505	0.00%
			TriEnergy Holdings, LLC	NPAR, LLC		24/199	
			NPAR, LLC	Chevron U.S.A. Inc.		756/332	
			Chevron U.S.A. Inc.	Statoil USA Onshore Properties Inc.		30/494	
			Chevron U.S.A. Inc.	Chesapeake Appalachia, L.L.C.		30/532	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
			Statoil USA Onshore Properties Inc.	SWN Production Company, LLC		33/424	
			Roy Alvin Schafer, Jr., a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1077/97	0.00%
			Edward John Schafer, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1077/102	0.00%
			2	13-8-3	735422/001	Donn W. Hogg (Remainderman), a single man	Chesapeake Appalachia, L.L.C.
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC					33/110	
735445/001	WesBanco Trust and Investment Services, Trustee, under Trust Agreement dated 02/29/2012, FBO Jane Marie Robertson (Remainderman), by Lea Ridenhour, Trust Officer	Chesapeake Appalachia, L.L.C.			18.00%	836/573	0.00%
	Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC				33/110	
	735444/001	WesBanco Trust and Investment Services, Trustee, under Trust Agreement dated 02/29/2012, FBO Margaret Ellen Hogg (Remainderman), by Lea Ridenhour, Trust Officer			Chesapeake Appalachia, L.L.C.	18.00%	836/563
Chesapeake Appalachia, L.L.C.		SWN Production Company, LLC				33/110	
735448/001	Nancy Hamby (Remainderman), a single woman	Chesapeake Appalachia, L.L.C.			18.00%	836/585	0.00%

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 Office of Oil and Gas  
 AUG 28 2023  
 WV Department of  
 Environmental Protection

4705102505

EXHIBIT "A"

Betty Schafer MSH 401H

Marshall and Ohio Counties, West Virginia

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

		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	33/110			
	735447/001	Thomas G. Hogg (Remainderman), a single man	Chesapeake Appalachia, L.L.C.	18.00%	836/579	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110		
	744660/001	Judith Ann Stollar (Remainderman) and Ronald L. Stollar, her husband	Chesapeake Appalachia, L.L.C.	18.00%	837/66	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
3	13-8-4	744778/001	Donn W. Hogg (Remainderman), a single man	Chesapeake Appalachia, L.L.C.	18.00%	840/613	0.00%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
	744812/001	Nancy Hamby (Remainderman), a single woman	Chesapeake Appalachia, L.L.C.	18.00%	843/65	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
	744780/001	WesBanco Trust and Investment Services, Trustee, under Trust Agreement dated 02/29/2012, FBO Margaret Ellen Hogg (Remainderman), by Lea Ridenhour, Trust Officer	Chesapeake Appalachia, L.L.C.	18.00%	840/625	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
	744753/001	WesBanco Trust and Investment Services, Trustee, under Trust Agreement dated 02/29/2012, FBO Jane Marie Robertson (Remainderman), by Lea Ridenhour, Trust Officer	Chesapeake Appalachia, L.L.C.	18.00%	840/600	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
	744779/001	Thomas G. Hogg (Remainderman), a single man	Chesapeake Appalachia, L.L.C.	18.00%	840/619	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
	744754/001	Judith Ann Stollar (Remainderman) and Ronald L. Stollar, her husband	Chesapeake Appalachia, L.L.C.	18.00%	840/606	0.00%	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32		
4	13-8-5	725452/000	Vernon A. Kinneer, Jr. and Carla C. Kinneer, his wife; and Jamie Kinneer and Rebecca L. Kinneer, his wife	Chesapeake Appalachia, L.L.C.	12.50%	681/561	0.00%

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 WV Department of  
 Environment

AUG 28

4705102505

EXHIBIT "A"

Betty Schafer MSH 401H

Marshall and Ohio Counties, West Virginia

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

			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC	33/110		
5	13-8-6	725452/000	Vernon A. Kinneer, Jr. and Carla C. Kinneer, his wife; and Jamie Kinneer and Rebecca L. Kinneer, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 33/110	681/571	0.00%
6	13-8-2	733208/002	Kenneth Eugene Black and Bonnie Jeanette Black, his wife  Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 33/110	774/30	0.00%
		733208/001	Mildred Louise Black, a/k/a Mildred Louis Black, widow  Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 33/110	773/98	0.00%
7	13-8-2.1	733208/002	Kenneth Eugene Black and Bonnie Jeanette Black, his wife  Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 33/110	774/30	0.00%
		733208/001	Mildred Louise Black, a/k/a Mildred Louis Black, widow  Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 33/110	773/98	0.00%
8	13-3-11	733785/000	Mildred Black, a widow  TriEnergy Holdings, LLC  AB Resources LLC  Chevron U.S.A. Inc  Chesapeake Appalachia, L.L.C.	TriEnergy Holdings, LLC AB Resources LLC Chevron U.S.A. Inc Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 19/623 756/397 30/532 33/110	655/538	0.00%
9	13-3-12.7	733785/000	Mildred Black, a widow  TriEnergy Holdings, LLC  AB Resources LLC  Chevron U.S.A. Inc	TriEnergy Holdings, LLC AB Resources LLC Chevron U.S.A. Inc Chesapeake Appalachia, L.L.C.	12.50% 19/623 756/397 30/532	655/538	0.00%

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EXHIBIT "A"

Betty Schafer MSH 401H

Marshall and Ohio Counties, West Virginia

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

			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
10	13-3-12.11	735395/000	Deanna Kay Black Lilley, a/k/a Deanna Black Lilley and Michael Lilley, a/k/a Michael C. Lilley, wife and husband Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	834/152	0.00%
11	13-3-12.12	725447/000	Donna M. Black Archey and William R. Archey, husband and wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	681/581	0.00%
12	13-3-5.5	732869/001	Brian F. Bonacci, a single man Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	764/390	0.00%
		732869/002	Frank A. Bonacci, a married man dealing in his sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	764/396	0.00%
13	13-3-5.1	732869/001	Brian F. Bonacci, a single man Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	764/390	0.00%
		732869/002	Frank A. Bonacci, a married man dealing in his sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	764/396	0.00%
14	13-3-5	732996/000	Louise S. Coulling, a married woman dealing in her sole and separate property Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.75%	767/473	0.00%
15	13-3-5.3	732995/004	Terry B. Sligar and Karen Schenk Sligar, husband and wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC		768/203	0.00%
		732995/002	Heidi Bruhn, f/k/a/ Heidi Schenk Hughes, married Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC		767/455	0.00%
		732995/003	Gary P. Hamilton and Mary Schenk Hamilton, husband and wife	Chesapeake Appalachia, L.L.C.		767/466	0.00%

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			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	732995/001		Louise S. Coulling, married, dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.		767/445	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	732995/005		White Horse Farm, LLC	Chesapeake Appalachia, L.L.C.		771/373	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	732995/006		Frank A. Bonacci, married	Chesapeake Appalachia, L.L.C.		782/385	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
	732995/007		Brian F. Bonacci, single	Chesapeake Appalachia, L.L.C.		782/393	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
16	13-3-2	733143/000	White Horse Farm, LLC	Chesapeake Appalachia, L.L.C.	18.75%	770/603	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
17	13-3-1	732089/000	Gwaine R. Folmar and Edith A. Folmar, his wife	Chesapeake Appalachia, L.L.C.	18.00%	753/527	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
18	13-2-26	725262/000	David T. Gibson and Vanessa A. Gibson, husband and wife	Chesapeake Appalachia, L.L.C.	14.00%	678/523	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
19	13-2-24	751244/001	William E. Gibson, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1080/511	0.00%
20	13-2-27	725263/000	Peggy A. Klug, single	Chesapeake Appalachia, L.L.C.	14.00%	678/524	0.00%
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
21	13-2-28.1	751244/001	William E. Gibson, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1080/511	0.00%
22	13-2-28	751244/001	William E. Gibson, married, dealing in his separate property	SWN Production Company, LLC	18.00%	1080/511	0.00%

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23	13-2-21.1	750148/000	Denise L. Williamson, single	Fossil Creek Ohio, LLC	18.00%	973/175	0.00%
			Fossil Creek Ohio, LLC	Gulfport Energy Corporation		34/374	
			Gulfport Energy Corporation and Fossil Creek Ohio, LLC	American Petroleum Partners Operating, LLC		36/588	
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		45/381	
24	13-2-20	725726/000	Richard E. Long and Mary D. Long, his wife	ALL Resources, L.L.C.	12.50%	676/236	0.00%
			ALL Resources, L.L.C.	Chesapeake Appalachia, L.L.C.		21/187	
			Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
25	13-2-19	751122/000	Thomas L. Schane and Sandra M. Schane, his wife	Fossil Creek Ohio, LLC	18.00%	930/429	0.00%
			Fossil Creek Ohio, LLC	Gulfport Energy Corporation		32/307	
			Fossil Creek Ohio, LLC	Gulfport Energy Corporation		32/322	
			Fossil Creek Ohio, LLC	Gulfport Energy Corporation		32/377	
			Gulfport Energy Corporation	American Petroleum Partners Operating, LLC		36/588	
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		45/381	
26	10-W95-112	750388/000	Peroni Construction, Inc., a West Virginia Corporation	American Petroleum Partners Operating, LLC	18.00%	938/122	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
27	10-W95-109	750223/000	APP Minerals, LLC	American Petroleum Partners Operating, LLC	15.00%	977/187	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
28	10-W94-1.1	750218/000	Bounty Minerals, LLC	American Petroleum Partners Operating, LLC	20.00%	949/328	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
29	1-RB2-24.1	750281/000	Bounty Minerals, LLC	American Petroleum Partners Operating, LLC	20.00%	949/333	0.00%

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			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
	751135/000		Bounty Minerals, LLC	American Petroleum Partners Operating, LLC	20.00%	949/343	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
	750158/000		Bounty Minerals, LLC	American Petroleum Partners Operating, LLC	20.00%	949/324	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
30	10-W90-46	750236/000	Chas M. Sledd Company, a West Virginia Corporation	American Petroleum Partners Operating, LLC	18.00%	936/697	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		980/572	
31	10-W90-52	761792/000	The Board of Commissioners of the County of Ohio, a/k/a, Ohio County Commission	SWN Production Company, LLC	18.00%	1001/776	0.00%
32	10-W90A-1	784152/000	MEC Enterprises, Inc., a West Virginia corporation, by Michaelene Bliss Pandelos, President	SWN Production Company, LLC	18.00%	998/47	0.00%
33	10-W90A-1.1	784152/000	MEC Enterprises, Inc., a West Virginia corporation, by Michaelene Bliss Pandelos, President	SWN Production Company, LLC	18.00%	998/47	0.00%
34	1-RB2J-25	761061/000	Dennis A. Reynolds and Elizabeth D. Reynolds, husband and wife	SWN Production Company, LLC	18.00%	995/561	0.00%
35	1-RB2J-24	761154/000	Jennifer A. Kutrovac, f/k/a Jennifer A. Guzolik, and George N. Kutrovac, wife and husband	SWN Production Company, LLC	18.00%	997/479	0.00%
36	1-RB2J-33	Pending	Franklin L. Potter and Patricia A. Potter, husband and wife	SWN Production Company, LLC	18.00%	1041/789	0.00%
37	1-RB2J-41	776995/000	Sally J. Kleeh, a widow and not remarried	SWN Production Company, LLC	18.00%	998/400	0.00%
38	1-RB2J-40	Pending	Michael A. Potts & Jenny M. Potts, husband and wife	SWN Production Company, LLC	18.00%	1046/683	0.00%
39	1-RB2J-61.3	760915/000	Joseph R. Bourgo and Sharon L. Bourgo, husband and wife	SWN Production Company, LLC	18.00%	994/183	0.00%
40	1-RB2J-61.4	760915/000	Joseph R. Bourgo and Sharon L. Bourgo, husband and wife	SWN Production Company, LLC	18.00%	994/183	0.00%
41	10-W80-1.4	776973/000	Wheeling Properties Co., a Joint Venture	American Petroleum Partners Operating, LLC	18.00%	949/481	0.00%
			American Petroleum Partners Operating, LLC	SWN Production Company, LLC		993/705	
42	1-RB2J-96	761090/000	Michael A. Carney and Cynthia S. Carney, husband and wife	SWN Production Company, LLC	18.00%	995/209	0.00%

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Betty Schafer MSH 401H

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43	1-RB2J-132	760918/000	Chester J. Kowalski, Jr. and Tama A. Kowalski, a/k/a Tama A. Kolar-Kowalski, husband and wife	SWN Production Company, LLC	18.00%	994/430	0.00%
44	1-RB2-20	776973/000	Wheeling Properties Co., a Joint Venture American Petroleum Partners Operating, LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	949/481 993/705	0.00%
J	13-8-7	725451/000	Vernon A. Kinneer, Jr. and Carla C. Kinneer, his wife; and Jamie Kinneer and Rebecca L. Kinneer, his wife Chesapeake Appalachia, L.L.C.	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50%	681/566 33/110	0.00%
F3	1-RB2J-42	776995/000	Sally J. Kleeh, single	SWN Production Company, LLC	18.00%	998/400	0.00%
P3	1-RB2J-131	761088/000	Eli Thomas Humphries and Breanna Nicole Humphries, husband and wife	SWN Production Company, LLC	18.00%	995/214	0.00%
A5	1-RB2J-111	760920/000	Sui Zheng and Shuxiang Chen, husband and wife	SWN Production Company, LLC	18.00%	994/418	0.00%
W6	1-RB2J-26	776990/000	Laurinda Jean Duffy, single	SWN Production Company, LLC	18.00%	997/489	0.00%
17	10-W90-47	750236/000	Chas M. Sledd Company, a West Virginia Corporation American Petroleum Partners Operating, LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	936/697 980/572	0.00%

Potentially Impacted Parcels - Parcels that may be impacted during drilling.

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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

July 26, 2023

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

**RE:** SWN's proposed New Well: Betty Schafer MSH 401H in Marshall County, West Virginia, Drilling under Elm Knoll Drive, Blacks Lane, Big Wheeling Creek Road, Berry Hollow Road, Green Tree Road, Woodcrest Drive, Westgate Drive, and East Bethlehem Boulevard.

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 Elm Knoll Drive, Blacks Lane, Big Wheeling Creek Road, Berry Hollow Road, Green Tree Road, Woodcrest Drive, Westgate Drive, and East Bethlehem Boulevard. 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,

Andrew M. Smith, RL  
Rotational Landman  
SWN Production Company, LLC

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

09/08/2023

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

Date of Notice Certification:                     

API No. 47- 051 -                       
Operator's Well No. Betty Schafer MSH 401H  
Well Pad Name: Betty Schafer MSH

**Notice has been given:**

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

State: West Virginia  
County: 051-Marshall  
District: Sand Hill  
Quadrangle: Moundsville  
Watershed: Wheeling Creek

UTM NAD 83 Easting: 531,110.560  
Northing: 4,426,807.663  
Public Road Access: Big Wheeling Creek  
Generally used farm name: Betty Scharfer MSH

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

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

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

**Certification of Notice is hereby given:**

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

Well Operator:	<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>Staff Regulatory Specialist</u>	Facsimile:	<u>304-884-1690</u>
Telephone:	<u>304-884-1610</u>	Email:	<u>Brittany_Woody@swn.com</u>

*Brittany Woody*



Subscribed and sworn before me this 22 day of June 2023.  
Elizabeth Blankenship Notary Public  
 My Commission Expires 6/23/2024

**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](mailto: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: 8/3 Date Permit Application Filed: 8/3

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: Appalachia Midstream Services, LLC  
Address: One Williams Center  
Tulsa, OK 74101

Name: Alvin Schafer Jr.  
Address: 3609 Big Wheeling Creek Road  
Wheeling, WV 26003

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

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: American Consolidated Natural Resources Attn: Mason Smith  
Address: 46226 National Road  
St. Clairsville, OH 43950

COAL OPERATOR

Name: Ohio County Mine  
Address: \_\_\_\_\_

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

Name: See Attachment 13A  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0429) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Well Location Restrictions**

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of a well pad 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

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

#### Water Well Testing:

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

#### Water Testing Laboratories:

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

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

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

#### Written Comment:

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

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

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.**

09/08/2023

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WW-6A  
(8-13)

API NO. 47-051 -  
OPERATOR WELL NO. Betty Schafer MSH 401H  
Well Pad Name: Betty Schafer MSH

### **Time Limits and Methods for Filing Comments.**

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

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

### **Comment Requirements**

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

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

### **Permit Denial or Condition**

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

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

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

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

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WW-6A  
(8-13)

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API NO. 47- 051 -  
OPERATOR WELL NO. Betty Schafer MSH 401H  
Well Pad Name: Betty Schafer MSH

**Notice is hereby given by:**

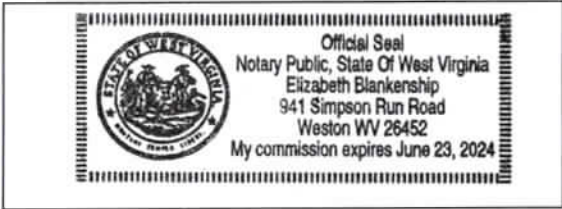
Well Operator: SWN Production Co., LLC  
Telephone: 304-884-1610  
Email: Brittany\_Woody@swn.com

*Brittany Woody*

Address: 1300 Fort Pierpont Dr., Suite 201  
Morgantown, WV 26508  
Facsimile: 304-884-1690

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 22 day of June 2023.  
Elizabeth Blankenship Notary Public  
My Commission Expires 6/23/2024

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Owner  
JESTERS COURT 13 INC ✓  
GRAY JOHN ALVIN ✓

Full Address  
322 JESTER COURT LN  
3609 BIG WHEELING CRK

Municipality Zip  
Wheeling 26003  
Wheeling 26003

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Owner	Full Address	Municipality	Zip
JESTERS COURT 13 INC	322 JESTER COURT LN	Wheeling	26003
GRAY JOHN ALVIN	3609 BIG WHEELING CRK	Wheeling	26003

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.

<h2>Water Purveyor Map</h2>		Well Pad: Betty Schafer	County: Marshall
Radius - 1500 ft Map by: youngst Nad 83 UTM Z one 17	Date: 6/12/2023 SWN <small>Southwest Water Network</small>	Water Sources Spring Water Well Pond	1 inch = 472 feet 0 165 330 660 990 1320 09/08/2023

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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:** 6/15/2023      **Date of Planned Entry:** 6/22/2023

**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: Appalachia Midstream Services, LLC ✓  
 Address: One Williams Center  
Tulsa, OK 74101  
 Name: Alvin Schafer Jr. ✓  
 Address: 3609 Big Wheeling Creek Road  
Wheeling, WV 26003  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: American Consolidated Natural Resources Attn: Mason Smith ✓  
 Address: 46226 National Road  
St. Clairsville, OH 43950  
 MINERAL OWNER(s)  
 Name: Edward J. Schafer & Brenda Schafer ✓  
 Address: 148 Valley Blvd.  
Wheeling, WV 26003  
 \*please attach additional forms if necessary

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**Notice is hereby given:**

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.990980, -80.635696</u>
County: <u>Marshall</u>	Public Road Access: <u>Big Wheeling Creek Road</u>
District: <u>Sand Hill</u>	Watershed: <u>Grandstaff Run-Wheeling Creek</u>
Quadrangle: <u>Moundsville</u>	Generally used farm name: <u>Betty Schafer MSH</u>

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

**Notice is hereby given by:**

Well Operator: <u>SWN PRODUCTION COMPANY, LLC</u>	Address: <u>1300 Fort Pierpont Dr., Suite 201</u>
Telephone: <u>304-884-1610</u>	<u>Morgantown, WV 26508</u>
Email: <u>Brittany_Woody@swn.com</u>	Facsimile: <u>304-884-1690</u>

**Oil and Gas Privacy Notice:**

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

09/08/2023

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

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

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

**Date of Notice:** 07/05/2023 **Date Permit Application Filed:** 7/10/23

**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: Alvin Schafer Jr.  
Address: 3609 Big Wheeling Creek Road  
Wheeling, WV 26003

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

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

State: West Virginia  
County: Marshall  
District: Sand Hill  
Quadrangle: Moundsville, WV  
Watershed: Wheeling Creek (HUC-10)

UTM NAD 83 Easting: 531,110.560  
Northing: 4,426,807.663  
Public Road Access: Big Wheeling Creek Road  
Generally used farm name: Betty Schafer

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**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: SWN Production Company, LLC  
Address: 1300 Fort Pierpont Dr., Suite 201  
Morgantown, WV 26508  
Telephone: 304-884-1675  
Email: Justin\_Booth@swn.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Justin Booth  
Address: 1300 Fort Pierpont Dr., 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 of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

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

**Notice Time Requirement:** notice shall be provided no later than the filing date of permit application.  
**Date of Notice:** 07/05/2023 **Date Permit Application Filed:** 07/05

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

- CERTIFIED MAIL  
RETURN RECEIPT REQUESTED
- HAND  
DELIVERY

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

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

Name: <u>Alvin Schafer Jr.</u>	Name: _____
Address: <u>3609 Big Wheeling Creek Road</u>	Address: _____
<u>Wheeling, WV 26003</u>	_____

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>531,110.560</u>
County: <u>Marshall</u>		Northing: <u>4,426,807.663</u>
District: <u>Sand Hill</u>	Public Road Access: <u>Big Wheeling Creek Road</u>	
Quadrangle: <u>Moundsville, WV</u>	Generally used farm name: <u>Betty Schafer</u>	
Watershed: <u>Wheeling Creek (HUC-10)</u>		

**This Notice Shall Include:**

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

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

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**Oil and Gas Privacy Notice:**

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

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**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF 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:** 07/05/2023 **Date Permit Application Filed:** 7/5

**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: Appalachia Midstream Services LLC  
Address: One Williams Center  
Tulsa, OK 74101

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

**Notice is hereby given:**

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

State: West Virginia  
County: Marshall  
District: Sand Hill  
Quadrangle: Moundsville, WV  
Watershed: Wheeling Creek (HUC-10)

UTM NAD 83 Easting: 531,110,560  
Northing: 4,426,807,663  
Public Road Access: Big Wheeling Creek Road  
Generally used farm name: Betty Schaefer

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Office of Oil and Gas  
2023  
WV Department of Environmental Protection

**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: SWN Production Company, LLC  
Address: 1300 Fort Pierpont Dr., Suite 201  
Morgantown, WV 26508  
Telephone: 304-884-1675  
Email: Justin\_Booth@swn.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Justin Booth  
Address: 1300 Fort Pierpont Dr., 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](mailto:depprivacyofficer@wv.gov).

09/08/2023

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**  
**Date of Notice:** 07/05/2023      **Date Permit Application Filed:** 07/05

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

- CERTIFIED MAIL       HAND
- RETURN RECEIPT REQUESTED      DELIVERY

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

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

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

Name: <u>Appalachia Midstream Services LLC</u>	Name: _____
Address: <u>One Williams Center</u>	Address: _____
<u>Tulsa, OK 74101</u>	_____

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>531,110.560</u>
County: <u>Marshall</u>		Northing: <u>4,426,807.663</u>
District: <u>Sand Hill</u>	Public Road Access: <u>Big Wheeling Creek Road</u>	
Quadrangle: <u>Moundsville, WV</u>	Generally used farm name: <u>Betty Schafer</u>	
Watershed: <u>Wheeling Creek (HUC-10)</u>		

**This Notice Shall Include:**

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

Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>1300 Fort Pierpont Dr., Suite 201</u>
Telephone: <u>304-884-1675</u>	<u>Morgantown, WV 26508</u>
Email: <u>Justin_Booth@swn.com</u>	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](mailto:depprivacyofficer@wv.gov).

Office of Oil and Gas  
NOTICE OF PLANNED OPERATION  
AUG 08 2023  
WV Department of Environmental Protection





4705102505

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

Gregory L. Bailey, P.E.  
Interim  
State Highway Engineer

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

July 31, 2023

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

Subject: DOH Permit for the Betty Schafer Pad, Marshall County  
Betty Schafer MSH 401H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2014-0640 which has been issued to Southwestern Energy for access to the State Road for a well site located off Marshall County Route 5 SLS MP 3.82.

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 March 6, 2023. 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 Operations Engineer  
Central Office O&G Coordinator

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Office of Oil and Gas  
AUG 03 2023  
WV Department of  
Environmental Protection

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

## Attachment VI Frac Additives

Product Name	Product Use	Chemical Name	CAS Number
HCL	Solvent	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
FSTI-CI-02	Corrosion Inhibitor	2-Butoxyethanol	111-76-2
		Ethylene glycol	107-21-1
		N,N-Dimethylformamide	68-12-2
		benzyl chloridequaternized	72480-70-7
		Cinnamaldehyde	104-55-2
		Isopropyl alcohol	67-63-0
		Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)- .omega.-hydroxy-	9016-45-9
		1-Decanol	112-30-1
		1-Octanol	111-87-5
		Triethyl phosphate	78-40-0
Ferriplex 80	Iron Control	Sodium Erythorbate	6381-77-7
Tolicide 4Frac	Biocide	Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8
		Quaternary ammonium compounds	68424-85-1
		Ethanol	64-17-5
		Water	7732-18-5
Plexslick 930	Friction Reducer	Hydrotreated Petroleum Distillate	64742-47-8
		Water	7732-18-5
		copolymer of 2-propenamide	69418-26-4
		Oleic Acid Diethanolamide	93-83-4
		Alcohol Ethoxylate Surfactants	68551-12-2
		Ammonium Chloride	12125-02-9
		Sodium Chloride	7647-14-5
Plexaid 655NM	Scale Inhibitor	ORGANIC PHOSPHONIC ACIDS SALTS	15827-60-8
		Water	7732-18-5
Plexslick V996	Friction Reducer	Hydrotreated Petroleum Distillate	64742-47-8
		Water	7732-18-5
		copolymer of 2-propenamide	69418-26-4
		Alcohol Ethoxylate Surfactants	68551-12-2
		Sodium Chloride	7647-14-5
Plexaid 655WG	Scale Inhibitor	ORGANIC PHOSPHONIC ACIDS SALTS	15827-60-8
		Water	7732-18-5
		Glycerin	67-56-1
Clearal 270	Biocide	Glutaraldehyde	111-30-8
		Didecyldimethylammonium Chloride	7173-51-5
		Quaternary Ammonium compounds, Benzyl-C12-C16-alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
		Water	7732-18-5
StimSTREAM SC 398 CW	Scale Inhibitor	Ethylene glycol	107-21-1
		CHEMSTREAM-Polymer-10001	CHEMSTREAM-Polymer-10001
		CHEMSTREAM-Polymer-10002	CHEMSTREAM-Polymer-10002
		Water	7732-18-5
StimSTREAM FR 9800	Friction Reducer	Chemstream-Alkane-00001	Chemstream-Alkane-00001
		Chemstream-Polymer-00001	Chemstream-Polymer-00001
		Ethoxylated alcohols (C12-16)	68551-12-2
		Water	7732-18-5
StimSTREAM FR 2800	Friction Reducer	Distillates (petroleum), hydrotreated light	64742-47-8
		Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9
		Water	7732-18-5
StimSTREAM FR 9725	Friction Reducer	Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium Chloride	12125-02-9
		Water	7732-18-5
StimSTREAM SC 398 C	Scale Inhibitor	CHEMSTREAM-Polymer-10001	CHEMSTREAM-Polymer-10001
		CHEMSTREAM-Polymer-10002	CHEMSTREAM-Polymer-10002
		Water	7732-18-5

As of 7/5/2023

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Office of Oil and Gas  
AUG 03 2023  
WV Department of  
Environmental Protection

09/08/2023

OPERATOR: SWN Production Co., LLC WELL NO: Betty Schafer MSH 401H

PAD NAME: Betty Schafer MSH

REVIEWED BY: \_\_\_\_\_ SIGNATURE: Bethany Nbody

### WELL RESTRICTIONS CHECKLIST

#### HORIZONTAL 6A WELL

*\*Pad Built 5/1/15*

#### Well Restrictions

- At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR
  - DEP Waiver and Permit Conditions
- At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR
  - DEP Waiver and Permit Conditions
- At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR
  - DEP Waiver and Permit Conditions
- At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR
  - Surface Owner Waiver and Recorded with County Clerk, OR
  - DEP Variance and Permit Conditions
- At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR
  - Surface Owner Waiver and Recorded with County Clerk, OR
  - DEP Variance and Permit Conditions
- At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR
  - Surface Owner Waiver and Recorded with County Clerk, OR
  - DEP Variance and Permit Conditions

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WV Department of  
Environmental Protection

4705102505



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Office of Oil and Gas

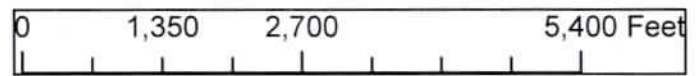
AUG 03 2023

WV Department of Environmental Protection



**Legend**

-  1000ft Radius
-  BettySchaferMSHPad1
-  Coal Mining

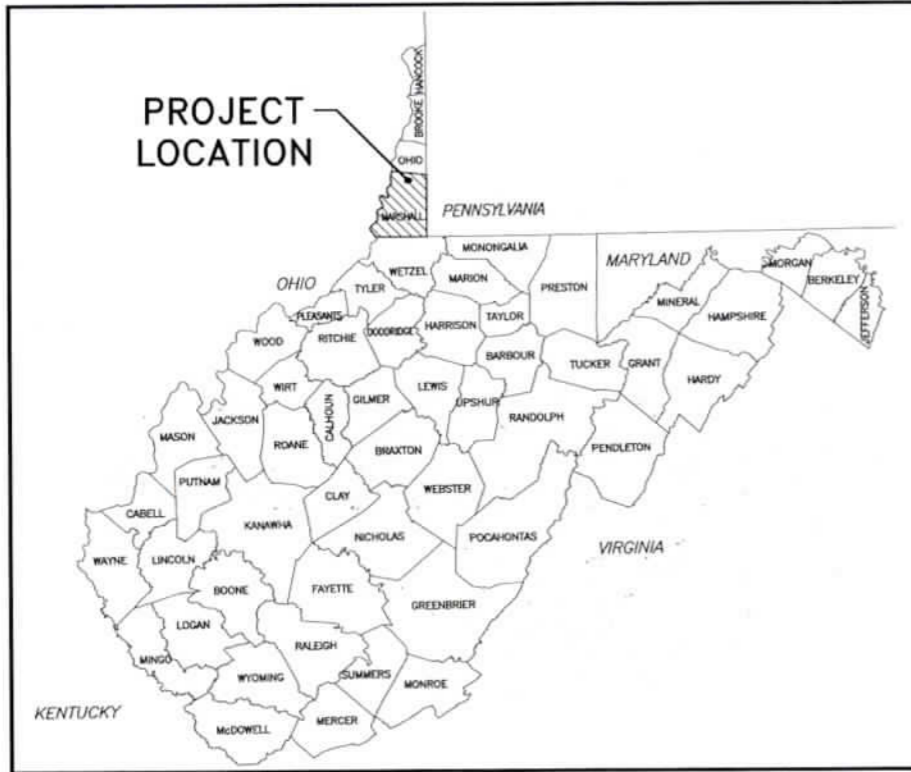


09/08/2023

# AS-BUILT SITE PLAN FOR BETTY SCHAFER MSH PAD SAND HILL DISTRICT, MARSHALL COUNTY, WV



DRAWN BY: JAR  
 DATE: 10/21/2015  
 SCALE: AS SHOWN  
 DWG. NO.: 087569000



**COUNTY MAP**  
N.T.S.



**LOCATION MAP**  
SCALE - 1"=1000'

WEST VIRGINIA 811

**CALL BEFORE YOU DIG!** Dial 811 or 800.245.4848  
Miss Utility of West Virginia

AT LEAST 48 HOURS, BUT NOT MORE THAN 10 WORKING DAYS (EXCLUDING WEEKENDS AND HOLIDAYS), PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES. ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL CONTACT MISS UTILITY OF WEST VIRGINIA AT 811 OR 1-800-245-4848.

Swn

Southwestern Energy®

**OPERATOR**

SWN PRODUCTION CO., LLC  
 ATTN: DEE SOUTHWALL  
 P.O. BOX 1300  
 JANE LEW, WV 26378  
 (832) 796-1614

*John Reed 7/20/2023*

**SITE DATA**

TOTAL DISTURBED AREA: 7.82 ACRES  
 ROAD DISTURBED AREA: 0.73 ACRES  
 PAD DISTURBED ACRES: 2.99 ACRES  
 ACCESS ROAD LENGTH: 1,118'  
 ACCESS ROAD AVERAGE WIDTH: 28'  
 WELL PAD ELEVATION: 849.1'

**WELL API NUMBERS**

201H API 051-01776  
 210H API 051-01777

**LIST OF DRAWINGS**

TS1.1	COVER SHEET
EP2.1	EVACUATION ROUTE/ PREVAILING WINDS
EP2.2	EVACUATION ROUTE/ PREVAILING WINDS
AS3.1	AS-BUILT OVERALL SITE PLAN
AS3.2	AS-BUILT SITE PLAN
AS3.3	AS-BUILT SITE PLAN
CRA4.1	ACCESS ROAD PROFILE
CRA4.2	WELL PAD CROSS SECTIONS
MRP5.1	RECLAMATION PLAN
MRD6.1	DETAILS
MRD6.2	DETAILS
MRD6.3	DETAILS

TS1.1

RETTEW

RETTEW Associates, Inc.  
 5143 Stoneham Rd, Ste 100, North Canton, OH 44720  
 Phone (330) 818-9770 Fax (717) 697-6953  
Engineers • Planners • Surveyors • Landscape Architects  
Environmental Consultants

COVER SHEET FOR

BETTY SCHAFER MSH PAD

SAND HILL DISTRICT MARSHALL COUNTY, WV

# AS-BUILT SITE PLAN

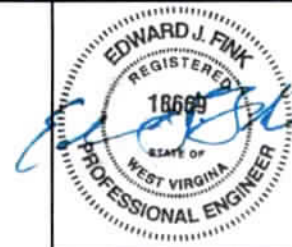
FOR

# BETTY SCHAFER MSH PAD

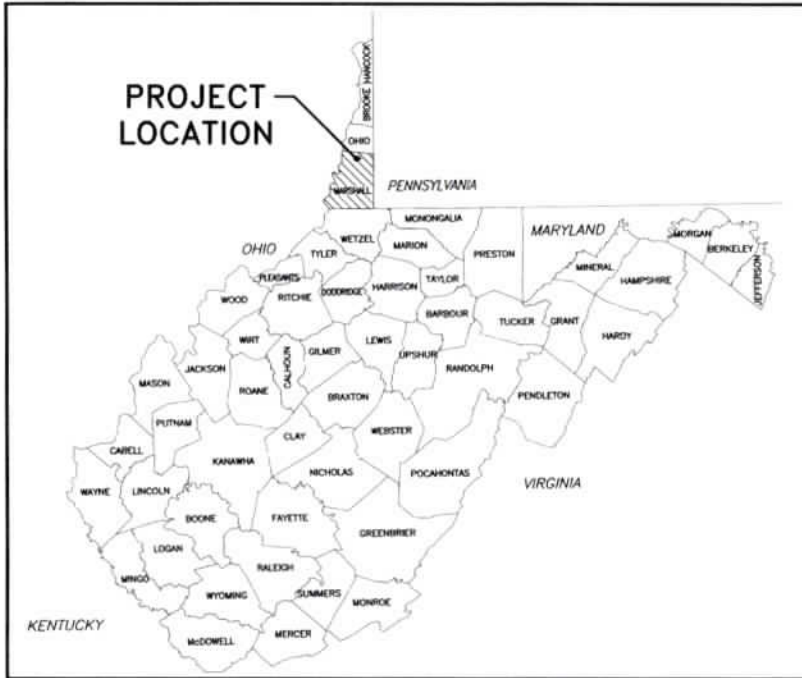
## SAND HILL DISTRICT, MARSHALL COUNTY, WV

**WVDEP OOG  
ACCEPTED AS-BUILT**

*WJ* 12/20/2019

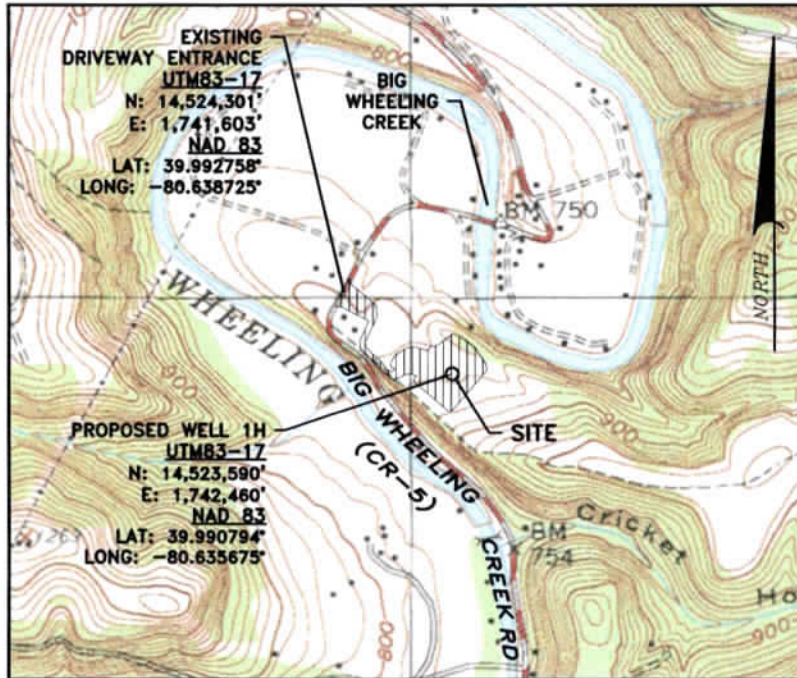


DRAWN BY: JAR  
DATE: 12/18/2109  
SCALE: AS SHOWN  
DWG. NO.: 087569000



COUNTY MAP

N.T.S.



LOCATION MAP

SCALE - 1"=1000'



**CALL BEFORE YOU DIG!** Dial 811 or 800.245.4848



**OPERATOR**

SWN PRODUCTION CO., LLC  
ATTN: DEE SOUTHALL  
P.O. BOX 1300  
JANE LEW, WV 26378  
(832) 796-1614

**SITE DATA**

TOTAL DISTURBED AREA: 7.82 ACRES  
ROAD DISTURBED AREA: 0.73 ACRES  
PAD DISTURBED AREA: 2.99 ACRES  
ACCESS ROAD LENGTH: 1,118'  
ACCESS ROAD AVERAGE WIDTH: 28'  
WELL PAD ELEVATION: 849.1'

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210H API 051-01777

**LIST OF DRAWINGS**

TS1.1	COVER SHEET	MRD6.4	DETAILS
EP2.1	EVACUATION ROUTE/ PREVAILING WINDS	MRD6.5	DETAILS
EP2.2	EVACUATION ROUTE/ PREVAILING WINDS	MRD6.6	DETAILS
AS3.1	AS-BUILT OVERALL SITE PLAN	MRD6.7	DETAILS
AS3.2	AS-BUILT SITE PLAN	MRD6.8	DETAILS
AS3.3	AS-BUILT SITE PLAN	MRD6.9	DETAILS
CRA4.1	ACCESS ROAD PROFILE		
CRA4.2	WELL PAD CROSS SECTIONS		
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MRD6.1	DETAILS		
MRD6.2	DETAILS		
MRD6.3	DETAILS		



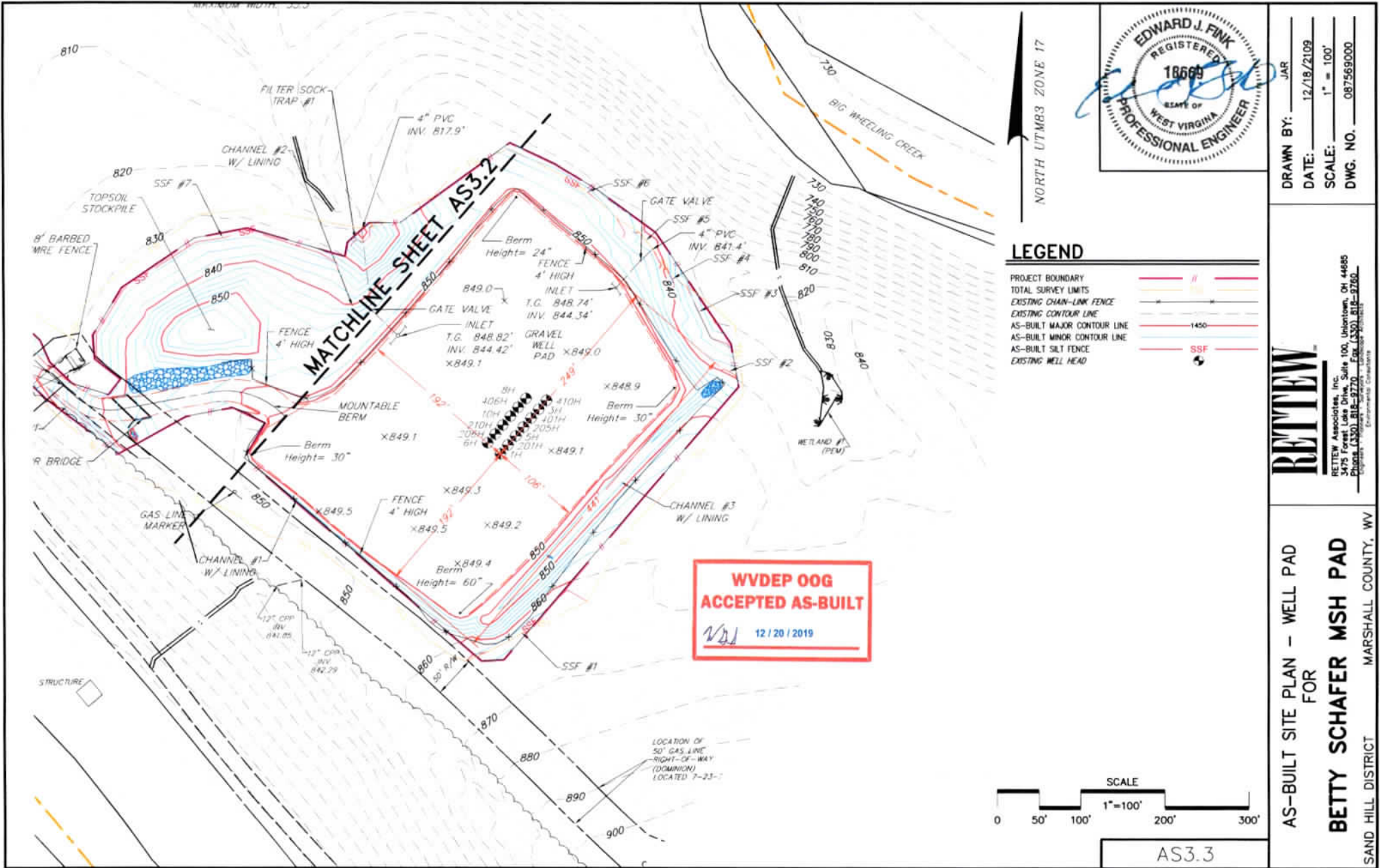
RETTEW Associates, Inc.  
3475 Forest Lake Drive, Suite 100, Uniontown, OH 44685  
Phone: (330) 818-9270 Fax: (330) 818-9280  
Copyright © 2019 RETTEW Associates, Inc.

COVER SHEET FOR

**BETTY SCHAFER MSH PAD**

SAND HILL DISTRICT MARSHALL COUNTY, WV

TS1.1



DRAWN BY: JAR  
 DATE: 12/18/2019  
 SCALE: 1" = 100'  
 DWG. NO.: 087569000

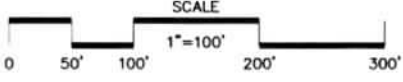
**LEGEND**

PROJECT BOUNDARY	—
TOTAL SURVEY LIMITS	—
EXISTING CHAIN-LINK FENCE	—
EXISTING CONTOUR LINE	—
AS-BUILT MAJOR CONTOUR LINE	—
AS-BUILT MINOR CONTOUR LINE	—
AS-BUILT SILT FENCE	—
EXISTING WELL HEAD	—



BETTEW Associates, Inc.  
 3475 Forest Lake Drive, Suite 100, Uniontown, OH 44685  
 Phone: (330) 818-9270 Fax: (330) 818-9280  
 Environmental Consulting

AS-BUILT SITE PLAN - WELL PAD  
 FOR  
**BETTY SCHAFFER MSH PAD**  
 SAND HILL DISTRICT MARSHALL COUNTY, WV



AS3.3