



west virginia department of environmental protection

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

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

Wednesday, August 28, 2024
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359


SPRING, TX 773914954


Re: Permit approval for Ruth Keller MSH 405H
47-051-02517-00-00

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: Ruth Keller MSH 405H
Farm Name: Brian J Keller, David J & Alice 
U.S. WELL NUMBER: 47-051-02517-00-00
Horizontal 6A New Drill
Date Issued: 8/28/2024

Promoting a healthy environment.

08/30/2024

PERMIT CONDITIONS 4705102517

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

CONDITIONS

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

08/30/2024

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 7-Union 486-Moundsville
Operator ID County District Quadrangle

2) Operator's Well Number: Ruth Keller MSH 405H Well Pad Name: Ruth Keller MSH

3) Farm Name/Surface Owner: Brian J. Keller & David J. & Alice M. Cook Public Road Access: Glen Dale Heights Road

4) Elevation, current ground: 1327' Elevation, proposed post-construction: 1327'

5) Well Type (a) Gas Oil Underground Storage

Other

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(b) If Gas Shallow Deep

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Horizontal

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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- 6355', Target Base TVD- 6411', Anticipated Thickness- 56', Associated Pressure- 4167

8) Proposed Total Vertical Depth: 6399'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 32,162'

11) Proposed Horizontal Leg Length: 24922.81'

12) Approximate Fresh Water Strata Depths: 462'

13) Method to Determine Fresh Water Depths: Salinity Profile on Serafin Ortiz Pad

14) Approximate Saltwater Depths: 1216' Salinity Profile

15) Approximate Coal Seam Depths: 830'

16) Approximate Depth to Possible Void (coal mine, karst, other): Possible Void 830'

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

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

Depth: _____

Seam: _____

Owner: _____

Stuart Jones
6/05/2024

WW-6B
(04/15)

API NO. 47-051 **4705102517**

OPERATOR WELL NO. Ruth Keller MSH 405H

Well Pad Name: Ruth Keller 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#	860'	860'	991 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	2159'	2159'	824 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	32162'	32162'	Tail 8100oz/100' Inside Intermediate
Tubing							
Liners							

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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"	0.330	1730	633	Class A	1.20/30% Excess
Coal	See	Surface	Casing				
Intermediate	9 5/8"	12 1/4"	0.352	3520	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/10-15% Excess
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

Trader Gower
6/05/2024

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): 6.78

22) Area to be disturbed for well pad only, less access road (acres): 4.30

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.

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

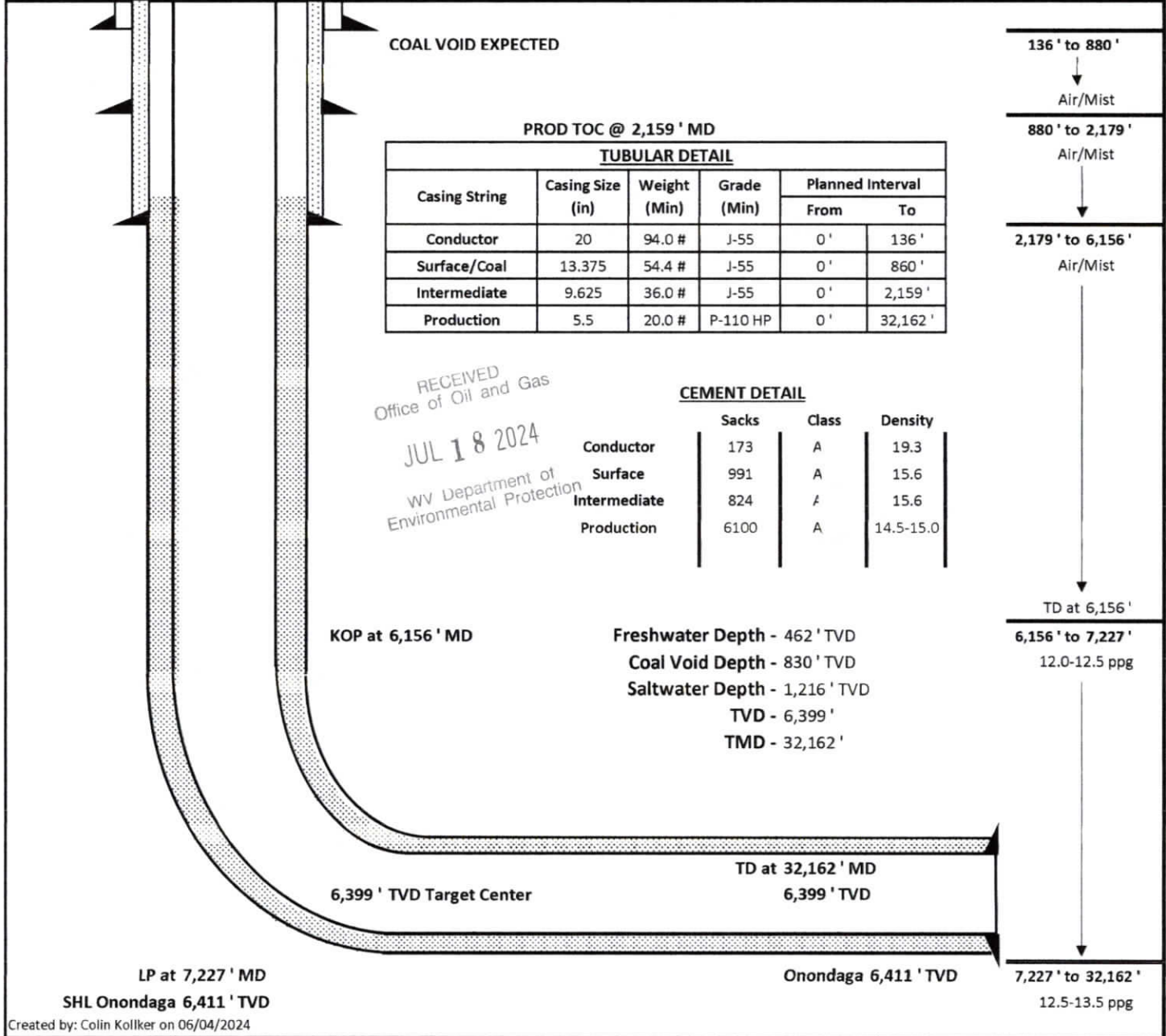
See Attachment ***

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

Southwestern Energy Company		Proposed Drilling Program	
Well:	RUTH KELLER MSH 405H	Re-entry Rig:	SDC 41
Field:	VICTORY FIELD WET	Prospect:	Marcellus Shale
County:	MARSHALL	State:	WV
SHL (NAD83):	39.985588 Latitude	-80.695763 Longitude	
BHL (NAD83):	40.051979 Latitude	-80.72095198 Longitude	
KB Elev:	1,353 ft MSL	KB: 26 ft AGL	GL Elev: 1,327 ft MSL



Created by: Colin Kollker on 06/04/2024

Strader Gower
6/05/2024

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CEMENT ADDITIVES						
INTERVAL	SCHLUMBERGER PRODUCT NAME	BJ PRODUCT NAME	NEXTier PRODUCT NAME	PRODUCT USE	CHEMICAL NAME	CAS-Number
SURFACE (FRESHWATER)	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	0110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION	XXXXXXXXXX	INTEGRA SEAL	0600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
INTERMEDIATE	D020	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	0047	FP 28L	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	CemNet	XXXXXXXXXX	XXXXXXXXXX	LOST CIRC MATERIAL	COATED FIBERGLASS FIBERS	PROPRIETARY
	SUGAR	SUGAR	CJ795	CMT RETARDER	SUCROSE	57-50-1
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
PRODUCTION	XXXXXXXXXX	XXXXXXXXXX	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	XXXXXXXXXX	55-IIW	0880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	D047	FP 28L	XXXXXXXXXX	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	XXXXXXXXXX	XXXXXXXXXX	OX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	XXXXXXXXXX	XXXXXXXXXX	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATICAMIDE POLYMER	PROPRIETARY
	0255	XXXXXXXXXX	XXXXXXXXXX	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	XXXXXXXXXX	XXXXXXXXXX	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
	XXXXXXXXXX	FL-66	0501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	XXXXXXXXXX	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	XXXXXXXXXX	VISCOSI FIER/ANTI-SETTLING AGENT	REFINED POLYMER/ CHRYSTALLINE SILICA	PROPRIETARY
	D198	R-3	XXXXXXXXXX	CEMENT RETARDER	LIGNIN	8068-51-6
	SUGAR	SUGAR	CJ795	CEMENT RETARDER	SUCROSE	57-50-1
	D065	XXXXXXXXXX	XXXXXXXXXX	DISPERSANT	SODIUM POLYNAPHTHALENE SULFONATE	8068-51-6
D800	XXXXXXXXXX	XXXXXXXXXX	CEMENT RETARDER (Mid-Temperature)	SODIUM LIGNOSULFONATE	8061-51-6	

April 16, 2024

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

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RE: Proposed New Well: Ruth Keller MSH 405H

Dear Mr. Brewer:

SWN has reviewed the area of the above mentioned well and discovered no shallow wells within 500' of the lateral. This well is situated on the Keller's property, in Union District, Marshall County, West Virginia.

If you have any questions or desire additional information, please me at 304-884-1613.

Thank you.

Sincerely,



Brittany Woody
Staff Regulatory Specialist
Southwestern Energy Production Company, LLC



4705102517

WW-9
(4/16)

API Number 47 - 051 -
Operator's Well No. Ruth Keller MSH 405H

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) Short Creek Ohio River 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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Will closed loop system be used? If so, describe: Yes- See Attachment 3A

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

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

Additives to be used in drilling medium? Attachment 3B

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

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

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

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

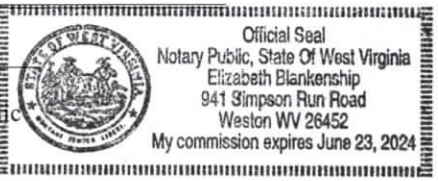
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

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 27 day of March, 2024
Elizabeth Blankenship Notary Public
My commission expires 6/23/2024



08/30/2024

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 6.78 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 4.30

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: STRADLER GOWEN John Cowan

Comments: _____

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Title: Oil & Gas Inspector

Date: 4/12/2024

Field Reviewed? (X) Yes () No

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, SOBM)

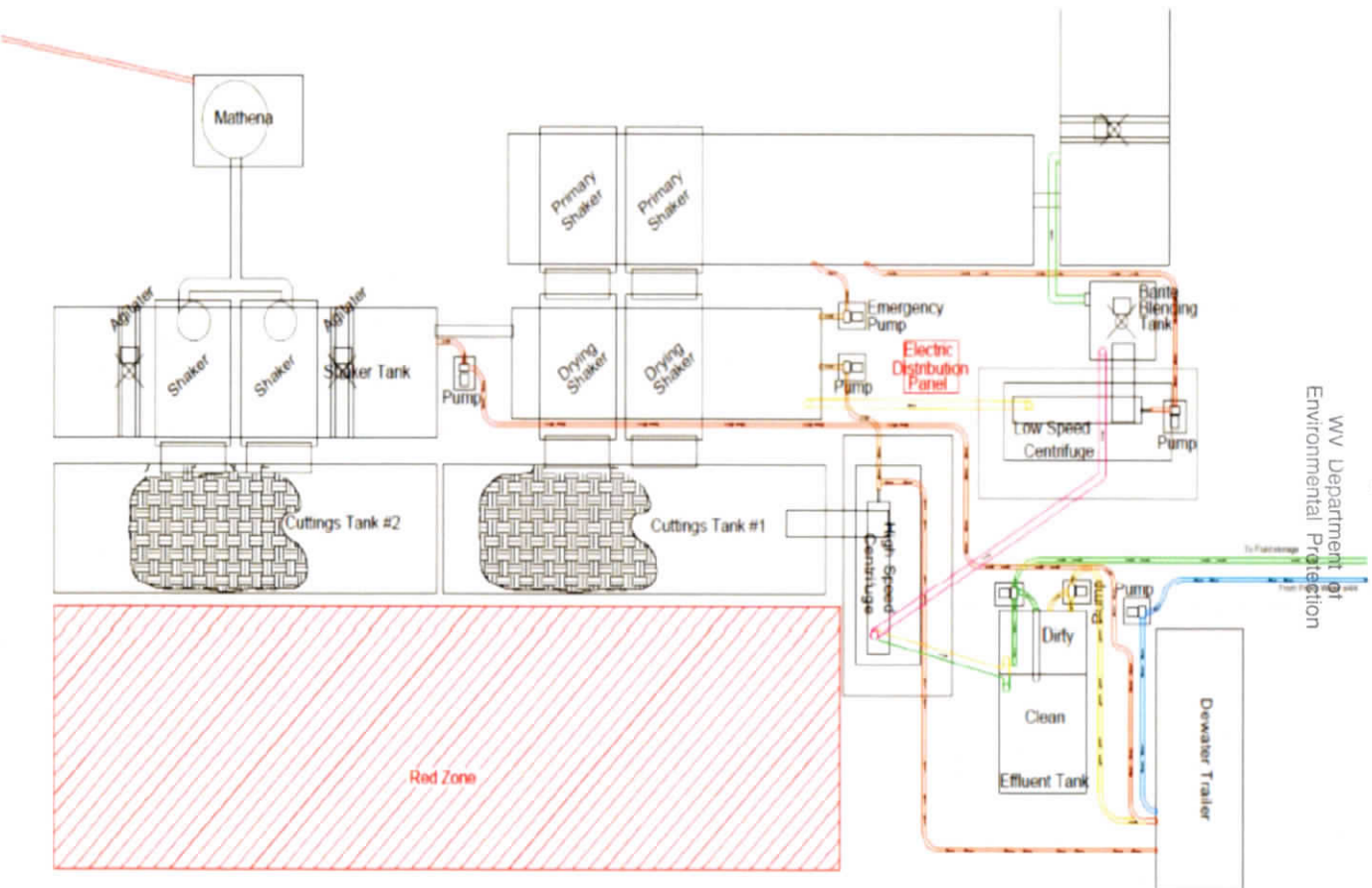
When drilling is converted to liquids drilling, the Shale Gas Separator and associated shaker tank are bypassed, and the liquids system is processed over the primary and drying shaker systems. Cuttings drop into the cuttings tank for additional processing. Any recoverable associated liquids attached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

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Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM

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Drilling Mediums

Surface/Coal (if present)/Freshwater Intervals

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present)

Air

Freshwater (if needed based on conditions)

Brine (if needed, base fluid for mud systems)

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



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

NON-ORGANIC PROPERTIES

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

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SOIL AMENDMENTS

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

Seeding Calculation Information:

1452' of 30' ROW/LOD is One Acre
 871' of 50' ROW/LOD is One Acre
 622' of 70' ROW/LOD is One Acre

Synopsis:

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

Special Considerations:

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

ORGANIC PROPERTIES

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

WETLANDS (delineated as jurisdictional wetlands)

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

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN 4705102517



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

API NO. 47-XXX-XXXXX
WELL NAME: Ruth Keller MSH 405H
Moundsville QUAD
Union DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody

Brittany Woody

Date: 3/18/2024

Title: Staff Regulatory Specialist

SWN Production Co., LLC

Approved by:

Name: STRADGER GOWER

Date: 4/17/2024

Title: OIL & GAS INSPECTOR

Approved by:

Name: _____

Date: _____

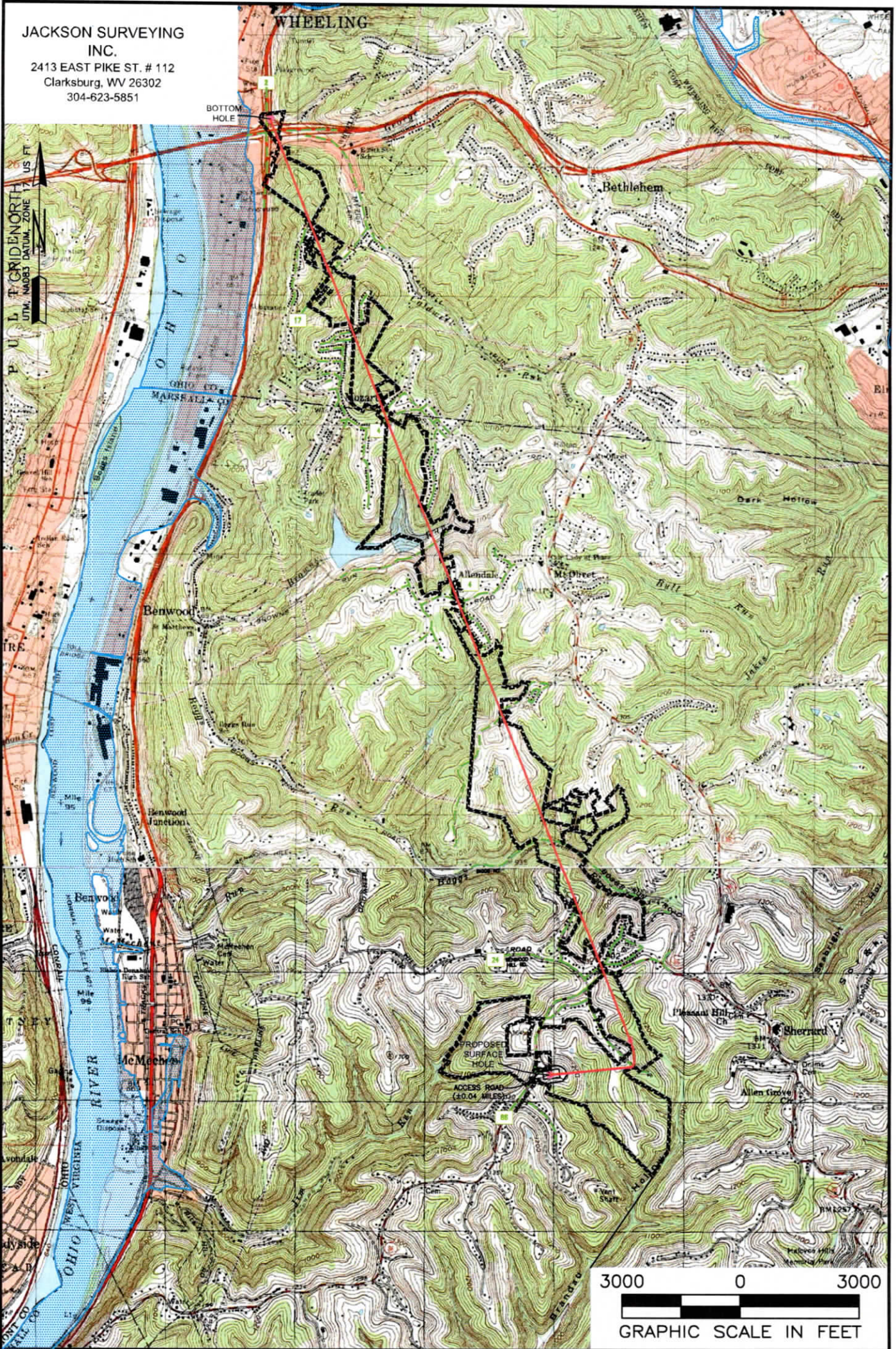
Title: _____

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SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

08/30/2024

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
- EXISTING / PRODUCING WELLHEAD
- LPL* LANDING POINT LOCATION
- FLOOD PLAN
- ACCESS ROAD
- PUBLIC ROAD
- LEASE BOUNDARY
- PROPOSED PATH

WELL OPERATOR:
SWN PRODUCTION COMPANY, LLC
ADDRESS:
1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508
SURFACE OWNER:
BRIAN J. KELLER & DAVID J. & ALICE M. COOK (TOD)

WELL (FARM) NAME: RUTH KELLER MSH	WELL # 405H	SERIAL #
COUNTY - CODE MARSHALL - 051	DISTRICT; UNION	
USGS 7 1/2 QUADRANGLE MAP NAME WILEVILLE, WV		

08/30/2024

Latitude: 40°00'00"

SURFACE HOLE 8152'

Latitude: 40°05'00"

BOTTOM HOLE 3531'

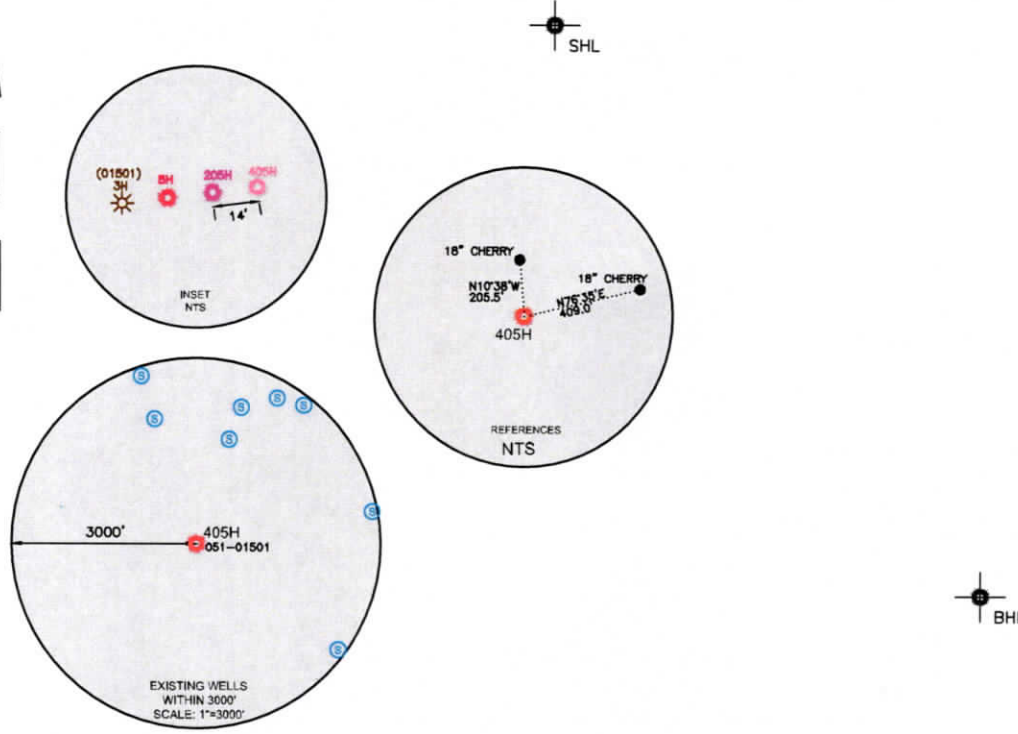
JACKSON SURVEYING INC.

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

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,201.969 EASTING: 525,975.082
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,426,494.852 EASTING: 526,583.058
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,433,563.730 EASTING: 523,801.402

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	S 74°24'11" W	463.94'	SHL TO LANDMARK	5/8" REBAR FOUND
L2	N 30°48'56" W	616.19'	SHL TO LANDMARK	5/8" REBAR FOUND
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 64°16'42" E	2,214.05'	2,764.75'	SHL TO LPL

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



WELL RESTRICTIONS

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

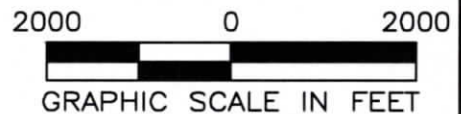
NOTES ON SURVEY

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

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

P.S. 708

David L Jackson



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 SOURCE OF SURVEY: GRADE GPS
 ELEVATION: (NAVD 88, US FT)

RUTH KELLER MSH
 OPERATOR'S WELL #: 405H
 API WELL #: 47 051 02517
 STATE COUNTY PERMIT

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

WATERSHED: SHORT CREEK OHIO RIVER (HUC-10) ELEVATION: 1327.1'

DISTRICT: UNION COUNTY: MARSHALL QUADRANGLE: MOUNDSVILLE, WV

SURFACE OWNER: BRIAN J. KELLER & DAVID J. & ALICE M. COOK (TOD) ACREAGE: ±173.061

OIL & GAS ROYALTY OWNER: BRIAN J. KELLER & DAVID J. & ALICE M. COOK (TOD) ACREAGE: ±173.061

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

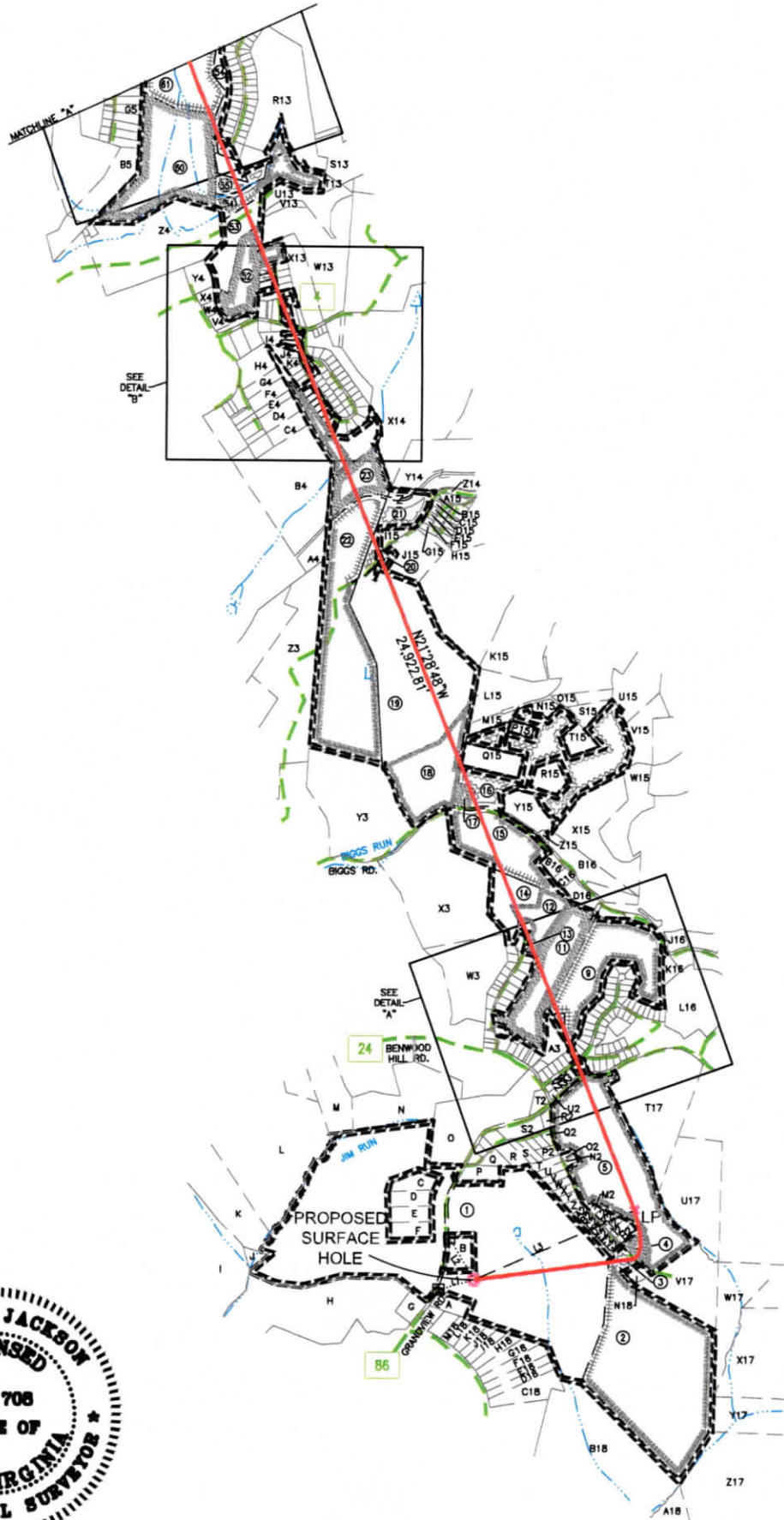
CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,398' TMD 32,152' 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:	— SURVEYED BOUNDARY	REVISIONS:	DATE: 06-06-2024
● PROPOSED SURFACE HOLE / BOTTOM HOLE	— DRILLING UNIT	(SEE PAGE 2 FOR REVISION NOTES)	DRAWN BY: N. MANO
● EXISTING / PRODUCING WELLHEAD	— LEASE BOUNDARY		SCALE: 1" = 2000'
LPL ● LANDING POINT LOCATION	— PROPOSED PATH		DRAWING NO:
● EXISTING WATER WELL			WELL LOCATION PLAT
● EXISTING SPRING			

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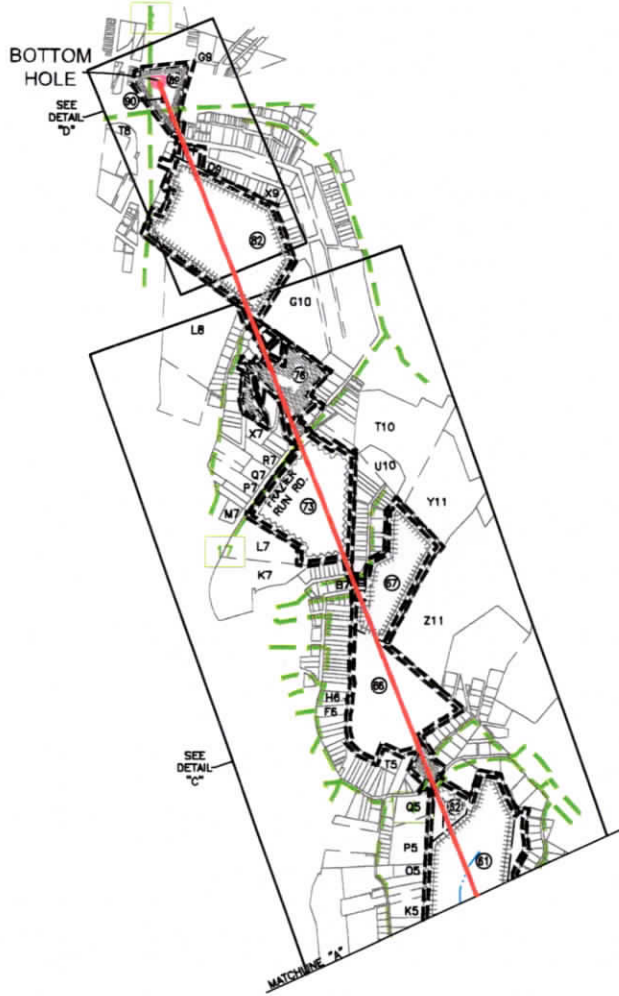
I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 708 *David L Jackson*

47-051-07517
 08/30/2024

REVISIONS:	COMPANY:			
Δ PG 2 RENUMBERED TRACTS 52-55 & 60-61.				
RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3.	OPERATOR'S		DATE: 06-06-2024	
PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	WELL #:		DRAWN BY: N. MANO	
	DISTRICT:		SCALE: N/A	
	UNION		DRAWING NO:	
	COUNTY:	STATE:	WELL LOCATION PLAT 2	
	MARSHALL	WV		

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



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.

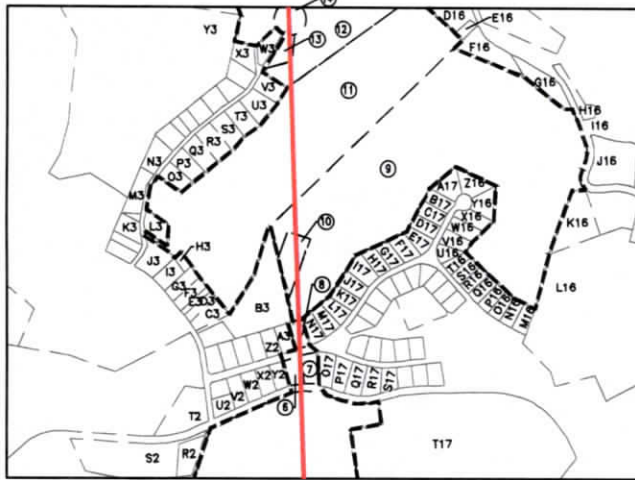
P.S. 708 *David L Jackson*

47-051-02517
 08/30/2024

REVISIONS: Δ PG 2 RENUMBERED TRACTS 52-55 & 60-61. RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3. PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	COMPANY: SWN Production Company, LLC	SWN Production Company™
OPERATOR'S WELL #: DISTRICT: UNION	RUTH KELLER MSH 405H COUNTY: MARSHALL	STATE: WV
		DATE: 06-06-2024 DRAWN BY: N. MANO SCALE: N/A DRAWING NO: WELL LOCATION PLAT 3

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

DETAIL "A"



DETAIL "B"



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.

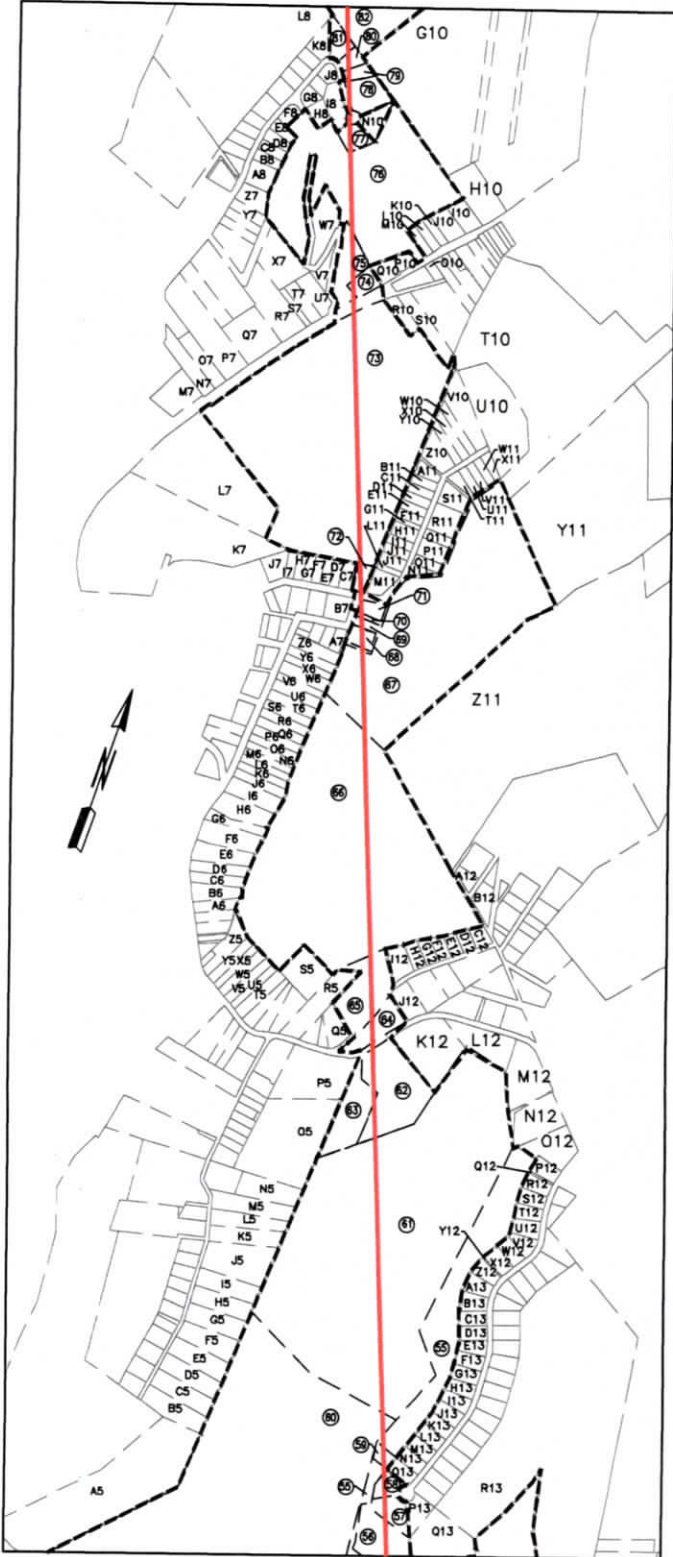
P.S. 708 *David L Jackson*

47-051-02517
 08/30/2024

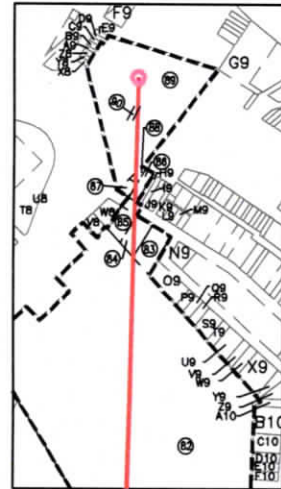
REVISIONS:	COMPANY:	DATE: 06-06-2024	
Δ PG 2 RENUMBERED TRACTS 52-55 & 60-61.		DRAWN BY: N. MANO	
RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3.		SCALE: N/A	
PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59.	OPERATOR'S	RUTH KELLER MSH	DRAWING NO:
08-22-2024	WELL #:	405H	WELL LOCATION PLAT 4
	DISTRICT:	UNION	
	COUNTY:	MARSHALL	
	STATE:	WV	

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

DETAIL "C"



DETAIL "D"



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

47-051-02517


08/30/2024

REVISIONS:		COMPANY:		DATE: 06-06-2024	
▲ PG 2 RENUMBERED TRACTS 52-55 & 60-61.		SWN		DRAWN BY: N. MANO	
RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3.		Production Company, LLC		SCALE: N/A	
PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024		OPERATOR'S: RUTH KELLER MSH		DRAWING NO:	
		WELL #: 405H		WELL LOCATION PLAT 5	
		DISTRICT: UNION			
		COUNTY: MARSHALL			
		STATE: WV			

JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
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WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	KELLER BRIAN J & COOK DAVID J & ALICE M - TOD (S/R)	13-6-50
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	VARGO CINDY L ET AL (S)	13-10-3
3	ALLEN RICHARD C ET UX (S)	13-7-52
4	JACKSON MICHELE D & DAVID L (S)	13-7-54
5	TUSKEY SHELLEY L & ROBERT K (S)	13-7-40
6	FITZPATRICK SEAN M ET AL (S)	13-7B-26
7	FITZPATRICK SEAN M ET AL (S)	13-7B-25
8	MURDOCK MELANIE S (S)	13-7B-7
9	FETTY JUDITH A - TOD (S)	13-7-1.7
10	MARSHALL COUNTY SEWERAGE DIST (S)	13-7-1.8
11	SIMON MARK CRAIG & LORI A - TOD (S)	13-6-29
12	STICKNEY BETH A & ERIC (S)	13-6-29.9
13	STICKNEY BETH A & ERIC (S)	13-6A-22
14	CRUPE JULES SCOTT (S)	13-6A-23
15	HARVEY SHERI SPERLUNG (S)	13-6-29.6
16	WARBLE TRANSMISSION LLC (S)	13-4-57
17	KEEDY KATHLEEN L (S)	13-4-59.9
18	WARBLE STEVEN M (S)	13-4-58
19	KUBANCIK SUZANNE M (S)	13-5-22
20	SHUTLER ROBERT J & ANTOINETTE (S)	13-5-21
21	STERN ROBERT L III & ROBBIE R (S)	13-5-15.3
22	SHUTLER ROBERT J III & ANTIONETTE (S)	13-5-15.1
23	OHIO COUNTY COAL RESOURCES INC (S)	13-5-14
24	OHIO COUNTY COAL RESOURCES INC (S)	13-5-14.1
25	STRAUTMANN HARRY A JR & WANDA K (S)	13-1-78.4
26	MARSHALL CO SEWERAGE DIST (S)	13-1J-51
27	HENSEL CHARLES K ET UX (S)	13-1J-17
28	SCHAU MATTHEW C ET UX (S)	13-1J-18
29	KLUG MARK A ET UX (S)	13-1J-19
30	FLADING RICHARD J ET AL (S)	13-1J-20
31	HANLUN MELISSA A (S)	13-1J-21
32	JENKINS STEPHEN W (S)	13-1J-22
33	TAYLOR CODY Z & HILLARY D (S)	13-1J-23
34	CROW NANCY JANE (S)	13-1J-24
35	MILLER CHRISTIAN M ET UX (S)	13-1J-48
36	MCFADDEN NATHAN T & HEATHER M (S)	13-1J-49
37	TRUBIANO JOE & PATRICIA - TRUST (S)	13-1J-50
38	GRESKEVITCH JOHN R & PATRICIA - TOD (S)	13-1J-30
39	WHITE THEODORE D (S)	13-1J-52
40	POWELL JOSEPH M & VAVROCK ROSEMARY A (S)	13-1J-53
41	BURKE ERICK M & BRIANNA N (S)	13-1J-54
42	STRAUTMANN HARRY A JR & WANDA K (S)	13-1-72
43	KLUG RONALD J ET UX (S)	13-1GG-10
44	KAHLE ANN M ET AL (S)	13-1GG-11
45	FINNEY ROSEANNA (S)	13-1GG-7
46	JOSEPH THOMAS E ET UX (S)	13-1GG-6
47	FINNEY ROSEANNA (S)	13-1GG-15
48	FINNEY ROSEANNA (S)	13-1GG-17
49	TAYLOR JACOB R & VIVIRITO ASHLEY M (S)	13-1GG-18
50	TAYLOR JACOB R & VIVIRITO ASHLEY M (S)	13-1GG-19
51	TAYLOR JACOB R & VIVIRITO ASHLEY M (S)	13-1GG-1
52	OHIO COUNTY COAL RESOURCES INC (S)	13-1-36.3
53	OHIO COUNTY COAL RESOURCES INC (S)	13-1-36.1
54	OHIO COUNTY COAL RESOURCES INC (S)	13-1-14.1
55	OHIO COUNTY COAL RESOURCES INC (S)	13-1-14
56	GOSSETT JEFFREY PAUL & KIMBERLY J KELLY (S)	13-1H-26.1
57	GOSSETT JEFFREY PAUL & KIMBERLY J KELLY (S)	13-1H-26
58	SIMONS RYAN S & CHEYENNE A (S)	13-1H-25
59	REDD DAVID J ET UX (S)	13-1H-24.1
60	OHIO COUNTY COAL RESOURCES INC (S)	13-1-7
61	OHIO COUNTY COAL RESOURCES INC (S)	13-1-8.1
62	ROSE KENNETH RICHARD ET AL (S)	13-1-8.2
63	ROSE MICHAEL A EST (S)	13-1-8.3
64	ROSE JACK (S)	5-RE2F-123
65	ROSE JACK (S)	5-RE2-7.1
66	RICHARDSON MYRAN Q (S)	5-RE2-7
67	CHAMPION KAREN K (S)	5-RE2-6
68	NIXON ANASTASIA M (S)	10-W89-144
69	PRETTYMAN CAYCE A (S)	10-W89-143
70	PRETTYMAN CAYCE A (S)	10-W89-143.1
71	MINZLER PATTI G (S)	10-W89-142
72	DIMMEY DEREK & CYNTHIA (S)	10-W89-136
73	DOBBS DANIEL & JULIE (S)	10-W85-58
74	CLEGG BETH A (S)	10-W85A-34.2
75	DOBBS DANIEL L & JULIE A (S)	10-W85A-34.4
76	DOBBS DANIEL L & JULIE A (S)	10-W85A-34
77	HENRY PATRICK & LAURIE (S)	10-W85A-34.3
78	HAMRICK CURTIS L JR & LC (S)	10-W85A-17
79	CHARLTON RICHARD K & CLARA E (S)	10-W85A-19
80	CHARLTON RICHARD K & CLARA E (S)	10-W85A-20
81	ELLISON SHARON L - TOD (S)	10-W85A-21
82	GRUBB EDWARD GARY & SUSAN (S)	10-W79-19
83	MCCARDLE MICAH S (S)	10-W73-321
84	FERRELLI JOHN N (S)	10-W73-320
85	FERRELLI JOHN N (S)	10-W73-319
86	SCHULTZ DEREK, CHRISTOPHER OR MICHAEL J (S)	10-W73-289
87	LINDNER CHARLES P & LORIE (S)	10-W73-290
88	CLEMONS MICHELLE L (S)	10-W73-291
89	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS (S)	1470 & RT 2, RT 250
90	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS (S)	1470 & RT 2, RT 250

47-051-02517
 08/30/2024

REVISIONS: <u>Δ</u> PG 2 RENUMBERED TRACTS 52-55 & 60-61. RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3. PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	COMPANY:  SWN Production Company, LLC	DATE: 06-06-2024
	OPERATOR'S WELL #: RUTH KELLER MSH 405H	DRAWN BY: N. MANO
	DISTRICT: UNION	SCALE: N/A
	COUNTY: MARSHALL	DRAWING NO: WELL LOCATION PLAT 6
	STATE: WV	

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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	BRAUTIGAN RANDY & KAYLA	13-6-50.7
B	KELLER WILLIAM J - TOD	13-6-50.2
C	BURKE ANDREA M & JAMES D	13-6-50.6
D	COOK DAVID J & ALICE - TOD	13-6-50.8
E	COOK STEVEN M & SHANNON R	13-6-50.3
F	COOK SUZANNE	13-6-50.4
G	DEFIBAUGH RONALD L	13-11-27.8
H	DEFIBAUGH RONALD L & SANDRA	13-11-27.1
I	LIPINSKI ERIC R & LORIE A	13-6-51
J	HAUGHT GEORGE ET UX	13-6-50.1
K	HAUGHT GEORGE ET UX	13-6-51.1
L	LONGWELL FRANK J & LORI A	13-6-49
M	O'NEAL CYNTHIA	13-6-45
N	HULL GAYLERD F & SHARON	13-6-23.11
O	CALDWELL CHRISTIAN A	13-7-1.1
P	KELLER BRIAN J & JANET	13-6-50.5
Q	HECKMAN FLORA BELLE - TOD	13-7C-18
R	VANNEST ALEX M & HOWARD ALLIE R	13-7C-17
S	FINNEGAN GEORGE ROBERT	13-7C-16
T	COX MARY FRANCES EST	13-7C-10
U	HARBISON WALTER L ET UX	13-7C-9
V	HARBISON WALTER L ET UX	13-7C-8
W	RENZELLA PATRICIA R	13-7C-7
X	DEL RE MARVIN E ET UX	13-7C-6
Y	NEMCOSKY ROBERT L ET UX	13-7C-5
Z	PEACE NATHANIEL O & ELAINE M	13-7C-4
A2	PEACE NATHANIEL O & ELAINE M	13-7C-3
B2	NOVICK RYAN J & ALEXANDRA P	13-7C-2
C2	ELSON LINDA S & SAMUEL F	13-7C-1
D2	SEACHRIST MARGARET TURNER -TOD	13-7-44
E2	SEACHRIST MARGARET TURNER -TOD	13-7-45
F2	YOUNG MICHAEL D ET UX	13-7-51
G2	YOUNG MICHAEL D ET UX	13-7-50
H2	SANTONAS JORDAN C & CLAIRE	13-7-49
I2	FREELAND BYRON C & KATHRYN A -TOD	13-7-53
J2	STAMPER LARRY J & PAULA JO	13-7-47
K2	LEMMON CHRISTOPHER D & STACIE	13-7-46
L2	DUFFIELD CORY L & YVETTE C	13-7-42
M2	DUFFIELD CORY L & YVETTE C	13-7-48
N2	RIGBY RALPH V ET UX	13-7-40.2
O2	SMITH MARK S ET UX	13-7-40.1
P2	BONENBERGER J KEITH ET UX	13-7C-11
Q2	HAUGHT CLIFTON R ET UX	13-7C-12
R2	GAMBLE ESTHER M	13-7C-23
S2	GAMBLE REBECCA C EST	13-7C-22
T2	SCHERICH LEIGH ANN	13-7-1.4
U2	HILL SANDRA K	13-7B-31
V2	COLE JEFFREY M	13-7B-30
W2	SARCOPSKI JOHN C & KAYLA	13-7B-29
X2	YOCUM TWILA E	13-7B-28
Y2	J & N PARRIOTT LLC	13-7B-27
Z2	KEIM DOUGLAS E ET UX	13-7B-5
A3	DOWNS FAMILY IRREVOCABLE TR	13-7B-6
B3	TOLER MARGARET - LIFE	13-7-1.2
C3	TOLER MARGARET - LIFE	13-6-29.5
D3	HULL GEORGE J & SANDRA	13-6-29.1
E3	HULL GEORGE J & SANDRA	13-6-29.2
F3	LONG CARL WAYNE ET UX	13-6-29.3
G3	JOHNSON ROBERT K & PATRICIA L	13-6-29.10
H3	FULTZ FAMILY TRUST	13-6-29.8
I3	FULTZ FAMILY TRUST	13-6-29.7
J3	TAVERNIA RICHARD L & SAMANTHA	13-6-29.4
K3	MONTES MARLENE - TOD	13-6A-9
L3	MONTES MARLENE - TOD	13-6A-19
M3	STEVEY GEORGE J JR	13-6A-8
N3	PORTER GREGORY G SR	13-6A-7
O3	SIMON MARK CRAIG & LORI A - TOD	13-6A-18
P3	SIMON MARK CRAIG & LORI A - TOD	13-6A-17
Q3	SIMON MARK CRAIG & LORI A - TOD	13-6A-16
R3	VISNIC GARY GABRIEL ET AL	13-6A-15
S3	HALL SHARON A	13-6A-14
T3	REED DAVID G	13-6A-13
U3	NEWLON CHARLES E	13-6A-12
V3	NEWLON CHARLES E	13-6A-11
W3	SCHRIMP ALLEN M & LINDA J	13-6A-21
X3	MCCLLELAND DAVID W & KIM E	13-6A-20
Y3	HALL LLOYD T & LORNA K	13-6-28.6
Z3	HALL LLOYD T & LORNA K	13-6-28
A4	OHIO COUNTY COAL RESOURCES INC	13-5-13.1
B4	GOLDBAUGH ANDREW & NATALIE	13-5-13
C4	SMITH PHILIP J & TAMMY L	13-1-77
D4	SMITH PHILIP J & TAMMY L	13-1-76.1
E4	SMITH PHILIP J & TAMMY L	13-1-76
F4	OHIO COUNTY COAL RESOURCES INC	13-1-75
G4	OHIO COUNTY COAL RESOURCES INC	13-1-74
H4	STRAUTMANN HARRY A JR & WANDA K	13-1-73
I4	MCCLURE JAMES D JR ET UX	13-1J-29
J4	UELTSCHY MARK L ET UX	13-1J-28

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
K4	WILSON RICHARD LET UX	13-1J-27
L4	IAROSSO DOMINIC C	13-1J-26
M4	KLUG LEO MICHAEL ET AL	13-1J-25
N4	STRAUTMANN HARRY A JR & WANDA K	13-1-72.1
O4	COOLEY DONALD J SR	13-1GG-12
P4	JOSEPH THOMAS E ET UX	13-1GG-15
Q4	KLEINEDLER PATRICIA	13-1GG-14
R4	STRAUTMANN HARRY A JR ET UX	13-1-72.2
S4	OHIO COUNTY COAL RESOURCES INC	13-1-71
T4	OHIO COUNTY COAL RESOURCES INC	13-1-70
U4	OHIO COUNTY COAL RESOURCES INC	13-1-69
V4	OHIO COUNTY COAL RESOURCES INC	13-1-68
W4	SHUTLER ROBERT J & ANTOINETTE	13-1-36
X4	OHIO COUNTY COAL RESOURCES INC	13-1-37
Y4	OHIO COUNTY COAL RESOURCES INC	13-1-37.2
Z4	OHIO COUNTY COAL RESOURCES INC	13-1-38
A5	OHIO COUNTY COAL RESOURCES INC	13-1-6
B5	COX LYDA FAMILY TRUST	13-1K-20
C5	NISPERLY RODNEY & KIMBERLY A	13-1K-19
D5	BOOHER DENISE L	13-1K-18
E5	BOOHER DENISE L	13-1K-17
F5	HALL ROBERT H & LAURA L	13-1K-16
G5	HALL ROBERT H & LAURA L	13-1K-15
H5	TATAR ERMA M - LIFE	13-1K-14
I5	BERNAS GARY M	13-1K-13
J5	SEIDLER LUCAS D	13-1K-12
K5	CALISSIE RONALD MET AL	13-1K-11
L5	ROWAN DEANNA S & JOHN P	13-1K-5
M5	ROWAN DEANNA S & JOHN P	13-1K-4
N5	SCHUBERT DEANNA L	13-1K-3
O5	MOORE ROBERT W & JALLETIA E	13-1-9.1
P5	SHAFFER STEPHEN W & MARY ELLEN	13-1-9
Q5	YENSEN JAMES DAVID ET UX	13-1B-15
R5	J B D J B LLC	13-1B-12
S5	BARNES FLORENCE JOANN	13-1B-11.1
T5	RICHARDSON MYRAN Q	13-1B-8
U5	RICHARDSON MYRAN Q	13-1B-7
V5	CONRAD WILLIAMS ET UX	13-1B-6
W5	HARMON DAVID L JR	13-1B-5
X5	O'KELLEY SANDRA L	13-1B-4
Y5	STROPE TERRY L & JODI LYN LIVING TRUST	13-1B-2
Z5	ELLIOTT JAMES E	13-1B-1
A6	BUCZEK DIANE LYNN	10-W89-26
B6	STOTTS SHANNON L	10-W89-25
C6	NOLL EDWIN F & JUDITH L - TOD	10-W89-24
D6	RHOADES WILLIAM E JR & LORRIE A NORMAN	10-W89-225
E6	KUCHENRITER KENNETH	10-W89-224
F6	MOZART PROPERTIES LLC	10-W89-223
G6	HENCH JAMES E	10-W89-222
H6	HENCH JAMES E	10-W89-220
I6	KORDACK GARY ALLEN KORDACK DONNA MARIE KAVESKI	10-W89-219
J6	BURRALL LEANNA F & S C	10-W89-218
K6	BURRALL SIDNEY C & LEEANNA F	10-W89-217
L6	WHORTON JOHN D	10-W89-216
M6	MOZART VOLUNTEER & IMPROVEMENT ASSOCIATION	10-W89-215
N6	RODOCKER STEPHEN D	10-W89-214
O6	SCHOSTAG STERLING THOMAS JAMES	10-W89-213
P6	HARTMAN BARTHOLOMEW W & HANA M	10-W89-212
Q6	FAHEY GEORGE J & PATRICIA -TOD	10-W89-211
R6	FAHEY GEORGE J & PATRICIA -TOD	10-W89-210
S6	GOLIATH REALTY & INVESTMENT GROUP LLC	10-W89-209
T6	KELLY RICHARD L & SUSAN	10-W89-208
U6	HARMON RENTALS LLC	10-W89-207
V6	SUTPHIN JESSICA	10-W89-206
W6	R&W HOLDINGS LLC	10-W89-205
X6	KELLY RICHARD L & S	10-W89-204
Y6	ROUSE STACY L & ROUSE EVERSCHA	10-W89-203
Z6	KOZLOWSKI LINDA (LIFE) & RICKY	10-W89-202
A7	NIXON ANASTASIA M	10-W89-145
B7	CAMPBELL BRUCE R & MARGIE M	10-W89-150
C7	DOBER ALEXIS N & LISA M DOBER	10-W89-134
D7	HOLDERS OF STRUCTURED ASSET SECURITIES CORP MORT 2008-BC2	10-W89-133
E7	WHITEHOUSE JEFF L	10-W89-132
F7	LAWSON STEPHEN A	10-W89-131
G7	REDD SHANE & COURTNI	10-W89-130
H7	ALLEN ELIZABETH CAROL	10-W89-129
I7	LOWELANCE S & J A	10-W89-128
J7	HICKS LINDA S	10-W89-127
K7	DOBBS DANIEL L; DOBBS JULIE A	10-W89-116
L7	DOBBS DANIEL L; DOBBS JULIE A	10-W85-58.1
M7	WEST JOHN D SR ESTATE	10-W85-37
N7	GRANDSTAFF JOSHUA T	10-W85-41
O7	PIETRAS GERARD S & JANINE	10-W85-42.1
P7	CALVERT PAULA JEAN	10-W85-43
Q7	FILLER CHARLENE AMY	10-W85-56
R7	SMITH ORVILLE ALLEN & ALEXIS ANN-MARIE RICKER-SMITH	10-W85-55
S7	HICKMAN JOSEPH M & PATRICIA A	10-W85-54
T7	HICKMAN JOSEPH M & PATRICIA M	10-W85-53
U7	HICKMAN JOSEPH M & PATRICIA A	10-W85-52
V7	DOBBS DANIEL L & JULIE A	10-W85A-34.4

*Highlighted Parcels may be impacted during drilled.

47-051-02517
08/30/2024

REVISIONS: ▲ PG 2 RENUMBERED TRACTS 52-55 & 60-61. RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3. PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	COMPANY: SWN Production Company, LLC	OPERATOR'S RUTH KELLER MSH	DATE: 06-06-2024
		WELL #: 405H	DRAWN BY: N. MANO
	DISTRICT: UNION	COUNTY: MARSHALL	SCALE: N/A
		STATE: WV	DRAWING NO: WELL LOCATION PLAT 7

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


TRACT	SURFACE OWNER	TAX PARCEL
W7	DOBBS DANIEL L & JULIE A	10-W85A-34.5
X7	HICKMAN JOSEPH M & PATRICIA A	10-W85-51
Y7	JUREK EVA M TOD	10-W85-49
Z7	SWANN TYLER L	10-W85-50
A8	MCGOVERN MICHAEL J	10-W85A-2
B8	MAZZOTTI GREGORY J & M K	10-W85A-3
C8	IANNARELLI ANTHONY J ET AL	10-W85A-4
D8	LITTLE TIMOTHY D & LISA F	10-W85A-5
E8	LITTLE TIMOTHY D & LISA F	10-W85A-6
F8	HAWKINS CHARLES H III	10-W85A-7
G8	MALLETT SHANE M MALLETT JOHN M & S A (RT OCC)	10-W85A-8
H8	CORAM THOMAS C & T R	10-W85A-34.1
I8	HENRY PATRICK & LAURIE	10-W85A-11
J8	SHOULDERS WESLEY S & JAMIE L	10-W85A-10
K8	BAKER WAYNE L & C A	10-W85A-22
L8	STATE ROAD COMMISSION OF WV	10-W79-18
M8	GRETCHEN REALTY LLC	10-W78-416.1
N8	GRETCHEN REALTY LLC	10-W78-416.2
O8	WEST VIRGINIA DEPT OF HIGHWAYS	10-W78-416.3
P8	GRETCHEN REALTY LLC	10-W78-416.4
Q8	KERCHER HARRISON	10-W73-1
R8	LABELLE GREENE IV LIMITED PARTNERSHIP	10-W72-380
S8	HELMBRIGHT MARY	10-W72-353
T8	LABELLE GREENE II LIMITED PARTNERSHIP	10-W72-350
U8	FOLSE JAY	10-W72-346
V8	PARSONS RUTH T ESTATE	10-W73-301
W8	DICKEY TYLER DAVID	10-W73-300
X8	RUNKLE MICHELLE R	10-W72-333.1
Y8	RUNKLE MICHELLE R	10-W72-333
Z8	RUNKLE MICHELLE P	10-W72-334
A9	CLARK DAVID C	10-W72-327.2
B9	HORBATAK MICHELLE	10-W72-327.1
C9	RUNKLE DAVID	10-W72-326.1
D9	RUNKLE MICHELLE	10-W72-325
E9	EAST MOUNTAINLAND LLC	10-W72-324
F9	WHG PITT DEVELOP CORP	10-W72-320.1
G9	MIKLAS SAMUEL A	10-W73-122
H9	MITCHAM TAILOR LYNN	10-W73-287
I9	HARVATH SANDRA LEE ESTATE	10-W73-288
J9	SCHULTZ BRUCE W	10-W73-285
K9	GROVES LINDA J & HARDING JOHN A	10-W73-284
L9	HUYNH HAI TRINH BICH	10-W73-282
M9	HUYNH HAI TRINH BICH	10-W73-281
N9	SMALL LAND HOLDINGS CO OF WV LLC	10-W73-334
O9	FERRELLI JOHN N	10-W73-322
P9	ZIMMERMAN NELLIE E	10-W73-323
Q9	REMICK CARL M & EM	10-W73-324
R9	SMALL LAND HOLDING CO OF WV	10-W73-325
S9	WHG DOLLAR SVG & TRST C/O WESBANCO BANK INC	10-W73-326
T9	SMALL LAND HOLDING CO OF WV	10-W73-327
U9	UNKNOWN OWNER	10-W73-328
V9	WHG DOLLAR SVGS & TR CO C/O WESBANCO BANK INC	10-W73-329
W9	REMICK CARL M & EM	10-W73-330
X9	WHEELING DOLLAR SVG & TRST C/O WESBANCO BANK INC	10-W73-331
Y9	REMICK CARL M & E M	10-W73-332
Z9	UNKNOWN OWNER	10-W73-333
A10	REMICK CARL M & EM	10-W79-22
B10	UNKNOWN OWNER	10-W79-23
C10	WHEELING DOLLAR SVG & TRST C/O WESBANCO BANK INC	10-W79-24
D10	SMALL LAND HOLDINGS CO OF WV LLC	10-W79-25
E10	WHEELING DOLLAR SVG & TRST C/O WESBANCO BANK INC	10-W79-26
F10	SMALL LAND HOLDING CO OF WV	10-W79-27
G10	DOBBS DANIEL LEE & JULIE ANN	10-W79-28
H10	MCGINNIS MATTHEW L	5-RE1P-10
I10	CLARK TERRY L & ANGELA M	5-RE1P-9
J10	SHOWALTER DONALD L & R J	5-RE1P-8
K10	SHOWALTER DONALD L SR & RHEA J	5-RE1P-7
L10	GAUDREAU A PIERRE & JEANINE GAUDREAU ESTATES	5-RE1P-7.2
M10	WAGNER FRANK A	5-RE1P-7.1
N10	HENRY PATRICK & LAURIE	10-W85A-15
O10	DIETRICH JAMES M	10-W85A-34.7
P10	ELSWICK CAITLYN FRANCIS	10-W85A-34.6
Q10	RINGER NORMA J ET AL	5-RE1P-84
R10	BURGER PETE R	5-RE2B-1.1
S10	BURGER PETE R	5-RE2B-1
T10	RADDISH JOSHUA R	5-RE2-1
U10	KELLY MICHELLE A	5-RE2-1.1
V10	KELLY MICHELLE A	10-W85-59
W10	BURCH KENNETH R (LE) MYRAN RICHARDSON	10-W85-60
X10	NELSON DAVID J & DEBRA S	10-W85-61
Y10	COOY TODD R & JASKO JENNIFER	10-W85-62
Z10	COOY TYLER B	10-W85-63
A11	BONACCI RENTALS LLC	10-W85-65
B11	SACCO ROBERT L & S A	10-W85-67.1
C11	RADCLIFFE NORMAN CURTIS	10-W85-67
D11	BOOTH JOHNNY LEE & JAMIE SUE	10-W85-68
E11	BORNER SHAUN L & MARIE A	10-W85-69
F11	BORNER SHAUN L & MARIE A	10-W85-70
G11	BORNER SHAUN L & MARIE A	10-W85-71
H11	MCNABB ROBERT G & JACKIE	10-W85-72

TRACT	SURFACE OWNER	TAX PARCEL
I11	HOLMAN LINDA & BALLER DENYLLE	10-W85-73
J11	GRIFFIN JACOB A	10-W85-74
K11	DOBER HAROLD A JR & LISA M	10-W89-137
L11	WHEELING POWER CO WHEELING ELECTRIC CO	10-W89-138
M11	BEAVER AMY L	10-W89-139
N11	WHEELING POWER CO WHEELING ELECTRIC CO	10-W89-140
O11	POSTLEWAIT LA; JACOBS P P C/O POSTLEWAIT LARRY A	10-W85-75
P11	BALL WILLIAM E & J L	10-W85-76
Q11	POSTLEWAIT BONNIE L (LE) POSTLEWAIT LA; JACOBS P P	10-W85-77
R11	SCHULER JAMES A & BARBARA	10-W85-78
S11	BOOTHBY RACHEL	10-W85-80
T11	GIESEY JUSTIN H & GENNIFER R	10-W85-81
U11	BOSTON DANIEL E & A M	10-W85-82
V11	COOY BRUCE C & T M	10-W85-83
W11	SHEPARD JAMES AND NANCY C	10-W85-84
X11	ADAMS CHARLES D & P M	10-W85-85
Y11	HOLT WILLIAM J & PHYLLIS J-TOD	5-RE2B-3
Z11	GRALL RONALD EARL JR & K F	5-RE2-5
A12	PELLUCHETTE AMBER SHELDON CLAYTON R	5-RE2F-69
B12	HERCULES BETTY J - TOD	5-RE2F-68
C12	SHAW ETTA M & RUTH A (LIFE)	5-RE2F-36
D12	SHELDON MARLENE R	5-RE2F-35.1
E12	SHELDON MARLENE R	5-RE2F-35
F12	REINACHER ANTHONY W	5-RE2F-34
G12	GIVENS DENNIS & DEBRA	5-RE2F-33
H12	RICHARDSON JUDY R	5-RE2F-32
I12	SCHUBERT MARY R MIRICH NANCY R	5-RE2F-31
J12	WHORTON PROPERTIES LLC	5-RE2F-122
K12	ROSE KENNETH RICHARD ET AL	13-1-8
L12	CARNEY LAWRENCE R	5-RE2F-128
M12	ANDERSON WENDY ANN & MARK RICHARD DELAURIE	5-RE2F-128.1
N12	DILLON RICHARD D	13-1-12
O12	HENRY PATRICK J & LAURIE L	13-1-13
P12	HORVATH GARY J	13-1H-51
Q12	ROBB CHLOE M & RICHARD A DIGIANDOMENICO	13-1H-1
R12	ROBB CHLOE M & RICHARD A DIGIANDOMENICO	13-1H-2
S12	KEEFER ROBERT & DONNA IRREVOCABLE TRUST	13-1H-3
T12	KEEFER ROBERT & DONNA IRREVOCABLE TRUST	13-1H-4
U12	FLESCH EARL JR ET UX	13-1H-5
V12	PRISNER JEFFREY G ET UX	13-1H-6
W12	UENHARDT RICHARD J	13-1H-7
X12	UENHARDT RICHARD J	13-1H-8
Y12	GRAY JEAN ANN ET AL	13-1H-9.1
Z12	GRAY JEAN ANN ET AL	13-1H-9
A13	JOHNSON GREGORY A ET UX	13-1H-10
B13	RICHARDS BRUCE	13-1H-11
C13	MARINOV ALLEN W	13-1H-12
D13	CUNNINGHAM DAVID A ET UX	13-1H-13
E13	KUDLAK PAUL P ET UX	13-1H-14
F13	HANM JONATHON MET UX	13-1H-15
G13	MAIN BRIAN D	13-1H-16
H13	LUMBRA MICHAEL & MARIE	13-1H-17
I13	NARRISH ANDREW E & PATRICIA A- TOD	13-1H-18
J13	OLIVER CURTIS R ET UX - TOD	13-1H-19
K13	BROWN TERRELL J	13-1H-20
L13	PASTORIUS JOHN M ET UX - TRUST	13-1H-21
M13	GARVIN CHRISTINA N MUSTACHIO	13-1H-22
N13	MONTGOMERY DEBRA LYNN ET VIR	13-1H-23
O13	REDD DAVID J ET UX	13-1H-24
P13	OHIO COUNTY COAL RESOURCES INC	13-1H-27
Q13	OHIO COUNTY COAL RESOURCES INC	13-1H-27.1
R13	OHIO COUNTY COAL RESOURCES INC	13-1-14.2
S13	BURUTCH FRANCES ET AL	13-1F-30
T13	OHIO COUNTY COAL RESOURCES INC	13-1F-30.2
U13	OHIO COUNTY COAL RESOURCES INC	13-1-34.1
V13	OHIO COUNTY COAL RESOURCES INC	13-1-34.3
W13	MARSH EDWARD C & MARGARET V	13-1-34
X13	MARSH JASON L	13-1-35
Y13	TAYLOR JACOB R & VIVIRITO ASHLEY M	13-1GG-2
Z13	TAYLOR JACOB R & VIVIRITO ASHLEY M	13-1GG-3
A14	FINNEY ROSEANNA	13-1GG-4
B14	FINNEY ROSEANNA	13-1GG-5
C14	RUSH JOHN E	13-1GG-8
D14	KLUG'S GREENHOUSE LLC	13-1GG-9
E14	PETTIT STEPHEN K & ELIZABETH A	13-1-78
F14	TOLAND WILLIAM FRANK JR ET UX	13-1J-1
G14	FONNER JAMES R	13-1J-2
H14	CAMPBELL TAYLOR	13-1J-31
I14	BYRUM DAWN A	13-1J-32
J14	SARATOGA PROPERTIES LLC	13-1J-47
K14	HYDE RYAN S & HOLLY C	13-1J-46
L14	IRVIN NICHOLAS A	13-1J-45
M14	JAFRATE THOMAS J ET UX	13-1J-44
N14	BECKETT GARY B & BRENDA L	13-1J-43
O14	SCHNEID CRAIG A ET UX	13-1J-42
P14	JEBBIA ALEXANDRA K & KAISERSCOTT M	13-1J-41
Q14	WELLMAN TODD ET AL	13-1J-40
R14	SMITH MICHAELA & DANIELLE L	13-1J-36
S14	MARSHALL CO SEWERAGE DIST	13-1J-15.1
T14	HENRY PARKER & ALLISON BAUER	13-1J-15

*Highlighted Parcels may be impacted during drilled.

47-051-02517

08/30/2024



REVISIONS: ▲ PG 2 RENUMBERED TRACTS 52-55 & 60-61. RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3. PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	COMPANY:  OPERATOR'S RUTH KELLER MSH WELL #: 405H DISTRICT: UNION	DATE: 06-06-2024 DRAWN BY: N. MANO SCALE: N/A DRAWING NO: WELL LOCATION PLAT 8
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JACKSON SURVEYING
INC.
2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
U14	ARCHEY RUSSELL ET AL	13-1J-14
V14	HELMAN TAMMY	13-1J-13
W14	GOODWIN DAVID E & CHRISTINE V TRAVIS	13-1J-12
X14	REDD JON D & BRIANNE V	13-1-79
Y14	OHIO COUNTY COAL RESOURCES INC	13-1-83
Z14	ZEAROTT WILLIAM S JR	13-5C-18
A15	MERINAR MILLIE JO	13-5C-20
B15	JONES JAMES L JR ET UX	13-5C-1
C15	JONES JAMES L JR ET UX	13-5C-2
D15	JONES JAMES L JR ET UX	13-5C-3
E15	COX DONALD E ET UX	13-5C-4
F15	MUSTACHIO EMILY A	13-5C-5
G15	PARSONS DONNA KAY	13-5C-6
H15	PARSONS DONNA KAY	13-5-20
I15	SHUTLER ROBERT J III & ANTIONETTE	13-5-15-2
J15	SHUTLER ROBERT J & ANTOINETTE	13-5-15
K15	STIDD FAMILY TRUST	13-4-59.3
L15	STIDD FAMILY TRUST	13-4-59.5
M15	BERNER MICHAEL A & CASSANDRA R	13-4-59.13
N15	KEEDY KATHLEEN L	13-4-59.14
O15	HARVEY ZANE S & SARA J	13-4-59.17
P15	MCLAUGHLIN DAVID & LAURA	13-4-59.16
Q15	ILOVAR DOUGLAS P & MICHELLE E	13-4-59.15
R15	POLING AARON M & ANDREA C	13-4-59.8
S15	BRATTON DOUGLAS A & RENA M	13-4-59.12
T15	HARTLE JAMES G & MELISSA C	13-4-59.11
U15	TOWN & COUNTRY ANIMAL HOSP INC	13-4-12
V15	HEWITT MICHAEL T JR & JESSICA	13-4-13.6
W15	HODGKISS MAURICE J - LIFE	13-4-53.3
X15	DONDA JEFFREY J	13-4-53
Y15	WARBLE STEVEN MSR	13-4-59.1
Z15	WARBLE STEVEN MSR	13-4-57.1
A16	TARR LORI J & JOHN D WHORTON	13-4-53.4
B16	WARBLE STEVEN M	13-4-56
C16	WARBLE STEVEN M	13-4-55
D16	WARBLE STEVEN MSR	13-4-54
E16	WARBLE STEVEN MSR	13-4-54.1
F16	SIMONS TONI L & WILLIAMS	13-4-52
G16	ACKERMAN DEBORAH K	13-4-51
H16	ACKERMAN DEBORAH K	13-4-53.5
I16	O'BRIGHT CHARLES B	13-4-50
J16	O'BRIGHT CHARLES B	13-4-49
K16	FETTY JUDITH A - TOD	13-7-1.6
L16	SIMONS KAREN J - TOD	13-7-2
M16	CONNER MICHAEL & CHASSITY	13-7B-65
N16	CONNER MICHAEL & CHASSITY	13-7B-64
O16	LIPINSKI STANLEY W & JENNIFER	13-7B-63
P16	BENNETT JAMES	13-7B-62
Q16	LIPINSKI STANLEY W & JENNIFER	13-7B-61
R16	LIPINSKI STANLEY W & JENNIFER	13-7B-60
S16	LIPINSKI STANLEY W & JENNIFER	13-7B-59
T16	BENNETT JAMES	13-7B-58
U16	YOUNG BRADLEY J	13-7B-57
V16	PRETTYMAN ALVIN A JR ET UX	13-7B-56
W16	BAUERLE LUCIA R - LIFE	13-7B-70
X16	WILLIAMS JONATHAN C	13-7B-76
Y16	SANDRICK ROBERT J JR	13-7B-75
Z16	CONNER ROBERT L & LISA M	13-7B-74
A17	GIBBONS CONSTANCE M	13-7B-73
B17	FISHER CHARLOTTE A	13-7B-72
C17	SANDRICK ROBERT	13-7B-71
D17	REYNOLDS JAMES G	13-7B-55
E17	BRAUTIGAM SHARI L	13-7B-54
F17	J & N PARRIOTT LLC	13-7B-16
G17	HENRY WILLIAM G ET UX	13-7B-15
H17	JOHNS JOHN L ET UX	13-7B-14
I17	GANTZER GREGORY R	13-7B-13
J17	WISE FRANK	13-7B-12
K17	GAMCIK GREGORY J	13-7B-11
L17	PATRICK CHAD A ET UX	13-7B-10
M17	WRIGHT AARON J	13-7B-9
N17	SHAW ROBERT A	13-7B-8
O17	SOVICH NETTIE M - EST	13-7B-24
P17	SOVICH NETTIE M - EST	13-7B-23
Q17	AMERICAN BONDING CO INC	13-7B-40
R17	DAILEY LORETTA D	13-7B-41
S17	NELSON NICK & HOLLY	13-7B-42
T17	AMRHEIN PAUL F II & PHYLLIS - TOD	13-7-39
U17	CALDWELL JANICE ANN EST - LIFE	13-7-38
V17	GAMBLE REBECCA EST	13-7-36
W17	GAMBLE ESTHER M	13-7-35
X17	MERINAR & KOONTZ CO	13-7-32
Y17	PARSONS DEANNA KAY - TOD	13-7-31.3
Z17	MCCABE FAMILY TRUST	13-10-5
A18	MCCABE FAMILY TRUST	13-10-4
B18	MARSHALL LAND LLC	13-10-2
C18	MOOSMAN MATTHEW G	13-10A-14
D18	WARD DEREK J	13-10A-13
E18	HUNTER WILLIAM D & MARLENE - TOD	13-10A-12
F18	HILL PATRICIA J	13-10A-11
G18	HILL PATRICIA J	13-10A-10
H18	HILL PATRICIA J	13-10A-9
I18	KANE VERONICA A	13-10A-8
J18	HULL GAYLE RD E	13-10A-7
K18	BRANNAN BRICIE GREER	13-10A-6
L18	MCCLURE DEVAN & LINDSEY CAIN	13-10A-5
M18	FECAT WALTER J JR ET UX	13-10A-4
N18	GAMBLE REBECCA C. EST	13-7-43

*Highlighted Parcels may be impacted during drilled.

47-051-02517
08/30/2024

REVISIONS: △ PG 2 RENUMBERED TRACTS 52-55 & 60-61. RENUMBERED TRACTS 61, 62, 66, 67, 73, 76, 82 & 89 ON PG 3. PG 5 ON DETAIL C LABELED TRACT 55 IN TWO PLACES ON EACH SIDE OF TRACT 59. 08-22-2024	COMPANY:  Production Company, LLC	 Production Company™
	OPERATOR'S WELL #: DISTRICT: UNION	RUTH KELLER MSH 405H COUNTY: MARSHALL STATE: WV
		DATE: 06-06-2024 DRAWN BY: N. MANO SCALE: N/A DRAWING NO: WELL LOCATION PLAT 9

WW-6A1
(5/13)

Operator's Well No. RUTH KELLER MSH 405H

**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"				

RECEIVED
Office of Oil and Gas

JUL 18 2024

WV Department of
Environmental Protection

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

*Horizontal well unit utilization - Subject to unitization filing with the West Virginia Oil and Gas Conservation Commission.

*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: 
 Its: STAFF LANDMAN

EXHIBIT "A"
Ruth Keller MSH 405H
Marshall County, 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

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG	% INTEREST NOT LEASED BY SWN PRODUCTION COMPANY, LLC
1)	13-0006-0050-0000	Ruth Ann Keller, married, dealing in her sole and separate interest David J. Cook, married	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00% 33/110 14.00% 33/110	683/433 33/110 684/547 33/110	0.00%
2)	13-0010-0001-0000	Cindy L. Vargo, a married woman dealing in her sole and separate property, Paul J. Musilli, single, Linda S. Ehon, a married woman dealing in her sole and separate property, Mark S. Musilli, single	American Petroleum Partners Operating LLC SWN Production Company, LLC	18.00%	914/136 48/263	0.00%
3)	13-0007-0052-0000	Richard C. Allen and Lynn M. Allen, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	17.00%	720/353 33/110	0.00%
4)	13-0007-0054-0000	Michele Diane Jackson and David L. Jackson, wife and husband	SWN Production Company, LLC	17.00%	1176/736	0.00%
5)	13-0007-0040-0000	Shelley L. Tuskey and Robert K. Tuskey, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	722/141 33/110	0.00%
6)	13-007B-0026-0000	Owen Fetty and Judith Ann Fetty, husband and wife Judith A. Fetty and Owen L. Fetty, wife and husband Anna Marie Sile, f/k/a Anna Marie Fetty, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 18.00% 18.00% 18.00%	839/301 38/35 839/319 38/35 839/334 38/35	0.00%
7)	13-007B-0025-0000	Owen Fetty and Judith Ann Fetty, husband and wife Judith A. Fetty and Owen L. Fetty, wife and husband Anna Marie Sile, f/k/a Anna Marie Fetty, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 18.00% 18.00% 18.00%	839/301 38/35 839/319 38/35 839/334 38/35	0.00%
8)	13-007B-0007-0000	Owen Fetty and Judith Ann Fetty, husband and wife Judith A. Fetty and Owen L. Fetty, wife and husband Anna Marie Sile, f/k/a Anna Marie Fetty, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	839/301 38/35 839/319 38/35 839/334 38/35	0.00%
9)	13-0007-0001-0007	Judith A. Fetty and Owen L. Fetty, wife and husband	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	839/149 38/35	0.00%
10)	13-0007-0001-0008	Marshall County Sewerage District	American Petroleum Partners Operating LLC SWN Production Company, LLC	18.00%	965/585 48/263	0.00%
11)	13-0006-0029-0000	Mark C. Simon	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	14.00%	692/128 33/110	0.00%
12)	13-0006-0029-0009	Beth A. Christman, n/k/a Beth A. Stuckney and Eric Lee Stuckney, wife and husband	TH Exploration, LLC American Petroleum Partners Operating, LLC SWN Production Company, LLC	19.00%	939/198 43/497 48/263	0.00%
13)	13-006A-0022-0000	Royalty Owner (subject to unitization filing dated June 28, 2024) Dennis Lee Millhouse, married and doing business in his sole and separate right Edward F. Jamison, Jr., a married man dealing in his sole and separate property Evelene E. Shums, a married woman and doing business in her sole and separate property Harry Edward Millhouse, married and doing business in his sole and separate right Kenneth Eugene Millhouse, married and doing business in his sole and separate right Charles David Millhouse, married and doing business in his sole and separate right Shauna Kay Millhouse Knox Biery, a married woman dealing in her sole and separate property Sheila Jo Millhouse Pell, a married woman dealing in her sole and separate property Sherri Lynn Millhouse Yoho, a married woman dealing in her sole and separate property	N/A Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	N/A 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	N/A 733/99 33/110 1187/393 727/106 33/110 733/87 33/110 733/93 33/110 733/81 33/110 733/81 33/110 1187/548 1187/561 1187/541	50.00%
14)	13-006A-0021-0000	Aules Scott Crupe, a married man dealing in his sole and separate property	American Petroleum Partners Operating LLC SWN Production Company, LLC	15.00%	939/624 48/263	0.00%
15)	13-0006-0029-0006	Royalty Owner (subject to unitization filing dated June 28, 2024) Dennis Lee Millhouse, married and doing business in his sole and separate right Edward F. Jamison, Jr., a married man dealing in his sole and separate property Evelene E. Shums, a married woman and doing business in her sole and separate property Harry Edward Millhouse, married and doing business in his sole and separate right Kenneth Eugene Millhouse, married and doing business in his sole and separate right Charles David Millhouse, married and doing business in his sole and separate right Shauna Kay Millhouse Knox Biery, a married woman dealing in her sole and separate property Sheila Jo Millhouse Pell, a married woman dealing in her sole and separate property Sherri Lynn Millhouse Yoho, a married woman dealing in her sole and separate property	N/A Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC Chesapeake Appalachia, L.L.C. SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	N/A 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	N/A 733/99 33/110 1187/393 727/106 33/110 733/87 33/110 733/93 33/110 733/81 33/110 1187/548 1187/561 1187/541	50.00%
16)	13-0004-0057-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
17)	13-0004-0059-0009	Kathleen L. Keedy, a married woman dealing in her sole and separate property	American Petroleum Partners Operating LLC SWN Production Company, LLC	18.00%	1008/164 48/263	0.00%
18)	13-0004-0058-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
19)	13-0005-0022-0000	Suzanne M. Kubanick	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	720/313 33/110	0.00%
20)	13-0005-0021-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156/144	0.00%
21)	13-0005-0015-0003	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156/144	0.00%
22)	13-0005-0015-0001	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156/144	0.00%
23)	13-0005-0014-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156/144	0.00%
24)	13-0005-0014-0001	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156/144	0.00%
25)	13-0001-0078-0004	Harry S. Strautman, Jr. and Wanda K. Strautman, husband and wife	SWN Production Company, LLC	18.00%	1178/497	0.00%
26)	13-0011-0051-0000	Marshall County Sewerage District	SWN Production Company, LLC	18.00%	1177/583	0.00%

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27	13-001J-0017-0000	Charles K. Hensel and Nancy J. Hensel, husband and wife	SWN Production Company, LLC	18.00%	1175175	0.00%
28	13-001J-0018-0000	Matthew C. Schau and Diane M. Schau, husband and wife	SWN Production Company, LLC	18.00%	1184577	0.00%
29	13-001J-0019-0000	Mark A. Klug and Carolyn L. Klug, husband and wife	SWN Production Company, LLC	16.00%	118020	0.00%
30	13-001J-0020-0000	Richard J. Flading and Jodi R. Flading, f/k/a Jodi R. Lysenki, husband and wife	SWN Production Company, LLC	18.00%	1184449	0.00%
31	13-001J-0021-0000	Melissa A. Hanlin, a single woman	SWN Production Company, LLC	16.00%	117981	0.00%
32	13-001J-0022-0000	Stephen W. Jenkins, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1179655	0.00%
33	13-001J-0023-0000	Cody Z. Taylor and Hillary D. Taylor, husband and wife	SWN Production Company, LLC	16.00%	1179168	0.00%
34	13-001J-0024-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
35	13-001J-0024-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
36	13-001J-0024-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
37	13-001J-0025-0000	Joe Michael Trubiano and Patricia Marie Trubiano, his wife	SWN Production Company, LLC	16.00%	1191734	0.00%
38	13-001J-0030-0000	John E. Greshkevich and Patricia Greshkevich, husband and wife	SWN Production Company, LLC	16.00%	1177527	0.00%
39	13-001J-0032-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
40	13-001J-0053-0000	Joseph M. Powell	SWN Production Company, LLC	16.00%	1177562	0.00%
41	13-001J-0054-0000	Erick M. Burke and Brianna N. Burke, husband and wife	SWN Production Company, LLC	16.00%	1184557	0.00%
42	13-0001-0072-0000	Harry S. Strautmann, Jr and Wanda K. Strautmann, husband and wife	SWN Production Company, LLC	18.00%	1178497	0.00%
43	13-01GG-0010-0000	Ronald J. Klug, a widower	SWN Production Company, LLC	18.00%	1177304	0.00%
44	13-01GG-0011-0000	SWN Production Company, LLC (Company Owned Minerals)	N/A	N/A	1128370	0.00%
45	13-01GG-0007-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
46	13-01GG-0006-0000	Thomas E. Joseph and Patricia A. Joseph, husband and wife	SWN Production Company, LLC	18.00%	1175637	0.00%
47	13-01GG-0016-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
48	13-01GG-0017-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
49	13-01GG-0018-0000	Jacob R. Taylor and Ashley M. Taylor f/k/a Ashley M. Vvirith, husband and wife	SWN Production Company, LLC	16.00%	1179298	0.00%
50	13-01GG-0019-0000	Jacob R. Taylor and Ashley M. Taylor f/k/a Ashley M. Vvirith, husband and wife	SWN Production Company, LLC	16.00%	1179298	0.00%
51	13-01GG-0001-0000	Jacob R. Taylor and Ashley M. Taylor f/k/a Ashley M. Vvirith, husband and wife	SWN Production Company, LLC	16.00%	1179298	0.00%
52	13-0001-0036-0003	SWN Production Company, LLC (Company Owned Minerals)	N/A	N/A	1179712	0.00%
53	13-0001-0036-0001	SWN Production Company, LLC (Company Owned Minerals)	N/A	N/A	1179712	0.00%
54	13-0001-0014-0001	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
55	13-0001-0014-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
56	13-001H-0026-0001	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
57	13-001H-0026-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
58	13-001H-0025-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
59	13-001H-0024-0001	David J. Redd and Michelle L. Redd, husband and wife	SWN Production Company, LLC	18.00%	1179139	0.00%
60	13-0001-0007-0000	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
61	13-0001-0008-0001	CNX Gas Company, LLC	SWN Production Company, LLC	18.00%	1156144	0.00%
62	13-0001-0008-0002	Jeffrey Lee Rose and Wendy R. Rose, husband and wife	TH Exploration, LLC	19.00%	98435	
		Eugene Rose	American Petroleum Partners Operating, LLC		43497	
			SWN Production Company, LLC		48263	
			TH Exploration, LLC	19.00%	98470	0.00%
			American Petroleum Partners Operating, LLC		43497	
			SWN Production Company, LLC		48263	
		Kenneth Richard Rose, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1177533	
63	13-0001-0008-0003	Jeffrey Lee Rose and Wendy R. Rose, husband and wife	TH Exploration, LLC	19.00%	98435	
		Eugene Rose	American Petroleum Partners Operating, LLC		43497	
			SWN Production Company, LLC		48263	
			TH Exploration, LLC	19.00%	98470	0.00%
			American Petroleum Partners Operating, LLC		43497	
			SWN Production Company, LLC		48263	
		Kenneth Richard Rose, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1177533	
64	05-RE2F-0123-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
65	05-RE2F-0007-0001	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
66	05-RE2F-0007-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
67	05-RE2F-0006-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
68	10-0WR9-0144-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
69	10-0WR9-0143-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
70	10-0WR9-0143-0001	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
71	10-0WR9-0142-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
72	10-0WR9-0136-0000	Derek Dimmey and Cynthia Dimmey	SWN Production Company, LLC	16.00%	1064725	0.00%
73	10-0W85-0058-0000	Daniel L. Dobbs and Julie A. Dobbs, husband and wife	American Petroleum Partners Operating, LLC	18.00%	935306	0.00%
			SWN Production Company, LLC		993705	
74	10-W85A-0034-0002	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
75	10-W85A-0034-0004	Daniel L. Dobbs and Julie A. Dobbs, husband and wife	American Petroleum Partners Operating, LLC	18.00%	935306	0.00%
			SWN Production Company, LLC		993705	
76	10-W85A-0034-0000	Daniel L. Dobbs and Julie A. Dobbs, husband and wife	American Petroleum Partners Operating, LLC	18.00%	935306	0.00%
			SWN Production Company, LLC		993705	
77	10-W85A-0034-0003	Cassandra Merkle, f/k/a Cassandra Henry, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1064652	
		Jennifer Nettles, f/k/a Jennifer Henry, a widow	SWN Production Company, LLC	18.00%	1064666	
		Jerome E. Henry, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064712	0.00%
		John J. Weisbar and Melissa M. Weisbar, f/k/a Melissa Henry, husband and wife	SWN Production Company, LLC	18.00%	1065420	
		Patrick J. Henry and Laurie L. Henry, husband and wife	SWN Production Company, LLC	18.00%	1064737	0.00%
		Robert E. Henry, Jr., a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064659	
78	10-W85A-0017-0000	Curtis L. Hamrick, Jr & Linda C. Hamrick	SWN Production Company, LLC	16.00%	1059733	0.00%
79	10-W85A-0019-0000	Richard K. Charlton and Clara E. Charlton, husband and wife	SWN Production Company, LLC	16.00%	1057244	0.00%
80	10-W85A-0020-0000	Richard K. Charlton and Clara E. Charlton, husband and wife	SWN Production Company, LLC	16.00%	1057244	0.00%
81	10-W85A-0021-0000	Sharon Lee Ellison, a widow	SWN Production Company, LLC	16.00%	1058247	0.00%
82	10-0W79-0019-0000	Edward Gary Grubb, a/k/a E. Gary Grubb and Susan Grubb, husband and wife	SWN Production Company, LLC	18.00%	1058506	0.00%
83	10-0W73-0321-0000	Micah S. McCardle	SWN Production Company, LLC	18.00%	105786	0.00%
84	10-0W73-0320-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
85	10-0W73-0319-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
86	10-0W73-0289-0000	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
87	10-0W73-0290-0000	Charles P. Lindner and Lorie A. Lindner, husband and wife	SWN Production Company, LLC	18.00%	1064378	0.00%
88	10-0W73-0291-0000	Michelle L. Clemons, a single woman	SWN Production Company, LLC	16.00%	1059745	0.00%
89	1470 & RT 2, RT 250	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	20.00%	1065582	0.00%
90	1470 & RT 2, RT 250	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
112	13-0007-0049-0000	Jordan C. Santomas and Claire Santomas (Subsurface Lessor Agreement)	SWN Production Company, LLC	N/A	1192424	100.00%
A3	13-007B-0006-0000	Oswen Fetty and Judith Ann Fetty, husband and wife	Chesapeake Appalachia, L.L.C.	18.00%	839301	
		Judith A. Fetty and Owen L. Fetty, wife and husband	SWN Production Company, LLC		3835	
			Chesapeake Appalachia, L.L.C.	18.00%	839319	0.00%
			SWN Production Company, LLC		3835	
		Anna Marie Sile, f/k/a Anna Marie Fetty, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	839334	
			SWN Production Company, LLC		3835	
B3	13-0007-0001-0002	Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	50.00%

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	Margaret A. Toler, widow (Life Tenant), and Lori E. Kestner (Remaindermen)	SWN Production Company, LLC	18.00%	1178.510	
V3)	13-006A-0011-0000 Charles E. Newton, a widower	TH Exploration, LLC	19.00%	918.302	
		American Petroleum Partners Operating, LLC		43.497	0.00%
		SWN Production Company, LLC		48.263	
W3)	13-006A-0021-0000 Allen M. Schrimp and Linda J. Schrimp, husband and wife	SWN Production Company, LLC	17.00%	1187.409	0.00%
I4)	13-001J-0029-0000 James D. McClure, Jr. and Helen McClure, husband and wife	SWN Production Company, LLC	18.00%	1130.607	0.00%
L4)	13-001J-0026-0000 Dominic C. Jarosi, a single man	SWN Production Company, LLC	16.00%	1187.107	0.00%
M4)	13-001L-0023-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
N4)	13-0001-0072-0001 Harry A. Strautmann, Jr. and Wanda K. Strautmann, husband and wife	SWN Production Company, LLC	18.00%	1178.497	0.00%
O4)	13-01GG-0012-0000 Donald J. Cooley, a widower	SWN Production Company, LLC	18.00%	1188.723	0.00%
P4)	13-01GG-0015-0000 Thomas E. Joseph and Patricia A. Joseph, husband and wife	SWN Production Company, LLC	18.00%	1175.637	0.00%
R5)	13-001B-0012-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
B7)	10-0WR9-0150-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
C7)	10-0WR9-0134-0000 Aleziz N. Dober and Lisa M. Dober	SWN Production Company, LLC	16.00%	1058.407	0.00%
H8)	10-W85A-0034-0001 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
I8)	10-W85A-0011-0000 Cassandra Merkle, fka Cassandra Henry, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1064.652	
	Jennifer Nettles, fka Jennifer Henry, a widow	SWN Production Company, LLC	18.00%	1064.666	
	Jerome E. Henry, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064.712	0.00%
	John J. Weisbar and Melissa M. Weisbar, fka Melissa Henry, husband and wife	SWN Production Company, LLC	18.00%	1065.420	
	Patrick J. Henry and Laurie L. Henry, husband and wife	SWN Production Company, LLC	18.00%	1064.737	
	Robert E. Henry, Jr., a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064.659	
H9)	10-0W73-0287-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
I9)	10-0W73-0288-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
N10)	10-W85A-0015-0000 Cassandra Merkle, fka Cassandra Henry, a married woman dealing in her sole and separate property	SWN Production Company, LLC	18.00%	1064.652	
	Jennifer Nettles, fka Jennifer Henry, a widow	SWN Production Company, LLC	18.00%	1064.666	
	Jerome E. Henry, a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064.712	0.00%
	John J. Weisbar and Melissa M. Weisbar, fka Melissa Henry, husband and wife	SWN Production Company, LLC	18.00%	1065.420	
	Patrick J. Henry and Laurie L. Henry, husband and wife	SWN Production Company, LLC	18.00%	1064.737	
	Robert E. Henry, Jr., a married man dealing in his sole and separate property	SWN Production Company, LLC	18.00%	1064.659	
M11)	10-0WR9-0139-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
O13)	13-001H-0024-0000 David J. Radd and Michelle L. Radd, husband and wife	SWN Production Company, LLC	18.00%	1179.139	0.00%
W13)	13-0001-0034-0000 Edward C. Marsh and Margaret V. Marsh, husband and wife	SWN Production Company, LLC	18.00%	1152.422	0.00%
A14)	13-01GG-0004-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
B14)	13-01GG-0005-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
D14)	13-01GG-0009-0000 Ronald J. Klug, a widower	SWN Production Company, LLC	18.00%	1177.304	0.00%
J14)	13-001I-0047-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
K14)	13-001I-0046-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
R14)	13-001I-0016-0000 Royalty Owner (subject to unitization filing dated June 28, 2024)	N/A	N/A	N/A	100.00%
J15)	13-0005-0015-0000 CNS Gas Company, LLC	SWN Production Company, LLC	18.00%	1156.144	0.00%
N15)	13-0004-0059-0014 Kathleen L. Koody, a married woman dealing with her sole and separate property	American Petroleum Partners Operating, LLC	18.00%	1008.164	0.00%
		SWN Production Company, LLC		48.263	
Q15)	13-0004-0059-0015 Kathleen L. Koody, a married woman dealing with her sole and separate property	American Petroleum Partners Operating, LLC	18.00%	1008.164	0.00%
		SWN Production Company, LLC		48.263	
N17)	13-007B-0008-0000 Owen Fetty and Judith Ann Fetty, husband and wife	Chesapeake Appalachia, L.L.C.	18.00%	839.301	
		SWN Production Company, LLC		38.35	
	Judith A. Fetty and Owen L. Fetty, wife and husband	Chesapeake Appalachia, L.L.C.	18.00%	839.319	0.00%
		SWN Production Company, LLC		38.35	
	Anna Marie Sile, fka Anna Marie Fetty, married and dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	18.00%	839.334	
		SWN Production Company, LLC		38.35	
*Co-tenancy utilization - At least 75% of the royalty owners have consented to the lawful use or development of the oil or natural gas mineral property on the tract. The interests of the remaining co-tenants will be secured pursuant to the Co-Tenancy Modernization and Majority Protection Act.					
*Potentially Impacted Parcels - Parcels that may be impacted during drilling.					
*Horizontal well unit utilization - Subject to unitization filing with the West Virginia Oil and Gas Commission					
END OF EXHIBIT "A"					

4705102517

April 1, 2024

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

RE: SWN's proposed New Well: Ruth Keller MSH 405H in Marshall County, West Virginia, Drilling under Grandview Road, Benwood Hill Road, Boggs Run Road, Marshall Co Rd 88/25, Allendale Road, Ellen Ave, Wel-Star Lane, S. Kettler Ave, Carl Street, McKinley Ave, Lower Incline Road, McCready Ave, and Euclid Ave.

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 Grandview Road, Benwood Hill Road, Boggs Run Road, Marshall Co Rd 88/25, Allendale Road, Ellen Ave, Wel-Star Lane, S. Kettler Ave, Carl Street, McKinley Ave, Lower Incline Road, McCready Ave, and Euclid Ave. Please be advised that SWN has attempted to lease all mineral owners under said route as it relates to the above-referenced well and unit. In several instances, SWN successfully obtained leases of the acreage underlying the road. Any remaining unleased roadway acreage has been included in SWN's pending forced-pooling (unitization) application which will be filed with the WV OGCC for the Ruth Keller Northeast Unit. We expect that all roadway acreage will be effectively under SWN's operational control following the issuance of an Order by the OGCC after the planned hearing.

Respectfully:

SWN Production Company, LLC



Gavin Nadeau, RPL
Staff Landman

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Office of Oil and Gas

JUL 18 2024

WV Department of
Environmental Protection



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

Date of Notice Certification: 7/16

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JUL 18 2024

API No. 47- 051 -
Operator's Well No. Ruth Keller MSH 405H
Well Pad Name: Ruth Keller MSH

Notice has been given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>525,975.082</u>
County:	<u>051-Marshall</u>		Northing:	<u>4,426,201.969</u>
District:	<u>Union</u>	Public Road Access:	<u>Glen Dale Heights Road</u>	
Quadrangle:	<u>Moundsville</u>	Generally used farm name:	<u>Ruth Keller MSH</u>	
Watershed:	<u>Short Creek Ohio River</u>			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY		OOG OFFICE USE ONLY
<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	<input checked="" type="checkbox"/> RECEIVED/ NOT REQUIRED
	<input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	
<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

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 notified 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.

08/30/2024

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>



Subscribed and sworn before me this 27 day of March 2024.
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.

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 Office of Oil and Gas
 JUL 18 2024
 WV Department of
 Environmental Protection

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

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

Date of Notice: 7/16 **Date Permit Application Filed:** 7/16

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: David Cook

Address: 1456 Sunset Lane

Glen Dale, WV 26038

Name: Brian Keller

Address: 4255 Glen Dale Heights Road

Glen Dale, WV 26038

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: Marshall Land LLC

Address: PO Box 261

Julian, WV 25529

COAL OPERATOR

Name: _____

Address: _____

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

Name: None

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____

Address: _____

*Please attach additional forms if necessary

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Office of Oil and Gas
JUL 18 2024
WV Department of
Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

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Well Location Restrictions

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

08/30/2024

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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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.**

08/30/2024

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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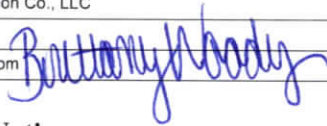
08/30/2024

WW-6A
(8-13)

API NO. 7705102517
OPERATOR WELL NO. Ruth Keller MSH 405H
Well Pad Name: Ruth Keller MSH

Notice is hereby given by:

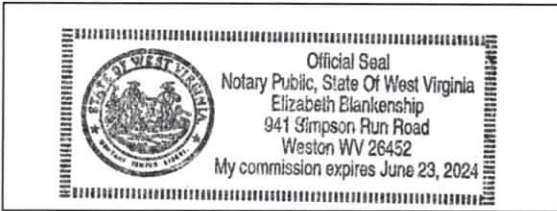
Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com



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.



Subscribed and sworn before me this 27 day of March 2024.

Elizabeth Blankenship Notary Public

My Commission Expires 6/23/2024

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4705102517



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.

Water Purveyor Map



Water Sources

- Type
- Spring
 - Water Well
 - Pond
 - 1500' Buffer

WELL PAD:
RUTH KELLER MSH PAD 1

COUNTY:
MARSHALL

08/30/2024

Scale: 1:6,033



4705102517

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: 3/1/2024 **Date of Planned Entry:** 3/7/2024

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: David Cook
 Address: 1456 Sunset Lane
Glen Dale WV 26038

Name: Brian J. Keller
 Address: 4255 Glen Dale Heights Road
Glen Dale WV 26038

Name: _____
 Address: _____

COAL OWNER OR LESSEE

Name: Marshall Land, LLC
 Address: PO Box 261
Julian WV 25529

MINERAL OWNER(s)

Name: Brian J. Keller
 Address: 4255 Glen Dale Heights Road
Glen Dale, WV 26038

*please attach additional forms if necessary

RECEIVED
Office of Oil and Gas
JUL 18 2024
WV Department of
Environmental Protection

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.986010, -80.697140</u>
County: <u>Marshall</u>	Public Road Access: <u>Glen Dale Heights Road</u>
District: <u>Union</u>	Watershed: <u>Upper Ohio South</u>
Quadrangle: <u>Moundsville</u>	Generally used farm name: <u>Ruth Keller 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 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

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

Facsimile: 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.

08/30/2024

4705102517

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

SURFACE OWNER(s)

Name: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

Name: _____
Address: _____

MINERAL OWNER(s)

Name: David J. Cook & Alice M. Cook
Address: 1456 Sunset Lane
Glen Dale, WV 26038

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Office of Oil and Gas
JUL 18 2024
WV Department of
Environmental Protection

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.986010, -80.697140</u>
County: <u>Marshall</u>	Public Road Access: <u>Glen Dale Heights Road</u>
District: <u>Union</u>	Watershed: <u>Upper Ohio South</u>
Quadrangle: <u>Moundsville</u>	Generally used farm name: <u>Ruth Keller 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 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

08/30/2024

4705102517

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: 04/19/2024 **Date Permit Application Filed:** 7/18

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: David Cook
Address: 1456 Sunset Lane
Glen Dale, WV 26038

Name: _____
Address: _____

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Office of Oil and Gas
JUL 18 2024
WV Department of
Environmental Protection

Notice is hereby given:

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

State: <u>WV</u>	UTM NAD 83	Easting: <u>525,975.082</u>
County: <u>Marshall</u>		Northing: <u>4,426,201.969</u>
District: <u>Union</u>	Public Road Access: <u>Grandview Road</u>	
Quadrangle: <u>Moundsville, WV</u>	Generally used farm name: <u>Ruth Keller</u>	
Watershed: <u>Short Creek Ohio River</u>		

This Notice Shall Include:

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

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Telephone: 570-575-6203
Email: bob_laine@swn.com
Facsimile: _____

Authorized Representative: Bob Laine
Address: 1300 Fort Pierpont Dr., Suite 201
Morgantown, WV 26508
Telephone: 570-575-6203
Email: bob_laine@swn.com
Facsimile: _____

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08/30/2024



4705102517

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

Office of the District Engineer/Manager
District Four

Post Office Box 4220 · Clarksburg, West Virginia 26302 · (304) 842-1500

Alanna J. Keller, P.E.
Deputy Secretary of Transportation
Deputy Commissioner of Highways

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

April 2, 2024

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

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Office of Oil and Gas
JUL 18 2024
WV Department of
Environmental Protection

Subject: DOH Permit for the Ruth Keller Well Pad, Marshall County
Ruth Keller MSH 405H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2011-0385 which has been issued to SWN Production Company, LLC for access to the State Road for a well site located off West Virginia Route 86, MP 4.61 in Marshall County

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,

Lacy D. Pratt
Central Office O&G Coordinator

Cc: Brittany Woody
SWN Production Company, LLC
OM, D-6
File

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

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WV Department of
Environmental Protection

As of 7/5/2023

08/30/2024

OPERATOR: SWN Production Co., LLC

WELL NO: Ruth Keller MSH 405H

PAD NAME: Ruth Keller MSH

REVIEWED BY: _____

SIGNATURE: *Brittany Woody*

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

**Pad Built 1/19/12*

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

Office of Oil and Gas
JUL 18 2024
WV Department of Environmental Protection

RUTH KELLER WELL PAD AS-BUILT AND EROSION & SEDIMENT CONTROL IMPROVEMENT PLAN

UNION DISTRICT, MARSHALL COUNTY, WEST VIRGINIA
WEGEE CREEK - OHIO RIVER WATERSHED

**WVDEP OOG
ACCEPTED AS-BUILT**

8/23/2024

LOCATION COORDINATES:

ACCESS ROAD ENTRANCE
LATITUDE: 36 885536 LONGITUDE: -80.697106 (NAD 83)
N 4426240.44 E 525860.23 (UTM ZONE 17 METERS)

CENTROID OF PAD
LATITUDE: 36 885629 LONGITUDE: -80.695655 (NAD 83)
N 4426206.56 E 525854.24 (UTM ZONE 17 METERS)

EVACUATION GATHERING AREA
LATITUDE: 36 885909 LONGITUDE: -80.696987 (NAD 83)
N 4426236.12 E 525872.17 (UTM ZONE 17 METERS)

GENERAL DESCRIPTION:

THE ACCESS ROAD(S) AND WELL PAD HAVE BEEN CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

FLOODPLAIN NOTES:

THE SITE IS LOCATED WITHIN FEMA FLOOD ZONE "X" PER FEMA FLOOD MAP #45001C008E.

MISS UTILITY STATEMENT:

MISS UTILITY SHALL BE NOTIFIED IF ANY ADDITIONAL EXCAVATION IS NECESSARY.

PROJECT CONTACTS:

OPERATOR:

SOUTHWESTERN ENERGY
179 INNOVATION DRIVE
JANE LEW, WV 26378
PHONE: (304) 617-1416

SHAWN JACKSON - FIELD PLANNING SUPERVISOR
OFFICE: (304) 864-1618 CELL: (304) 841-3804

AS-BUILT ENGINEER/SURVEYOR:

NAVITUS ENGINEERING, INC.
CYRUS S. KUMP, PE - PROJECT MANAGER/ENGINEER
OFFICE: (888) 462-4185 CELL: (540) 686-4747

NOTES:

- ALL BMP'S MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL ALL AREAS WITHIN THE LIMIT OF DISTURBANCE ARE COMPLETE AND PERMANENTLY STABILIZED. MAINTENANCE MUST INCLUDE INSPECTION OF ALL EROSION AND SEDIMENT CONTROLS AFTER EACH RAINFALL EVENT IN EXCESS OF 0.5" AND ON A WEEKLY BASIS.
- THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF FINAL STABILIZATION MUST BE INITIATED NO LATER THAN 7 DAYS AFTER REACHING FINAL GRADE. FINAL STABILIZATION MEANS THAT ALL SOIL-DISTURBING ACTIVITIES ARE COMPLETED, AND THAT EITHER A PERMANENT VEGETATIVE COVER WITH A DENSITY OF 70% OR GREATER HAS BEEN ESTABLISHED OR THAT THE SURFACE HAS BEEN STABILIZED BY HAND COVER SUCH AS PAVEMENT OR BUILDINGS. IT SHOULD BE NOTED THAT THE 70% REQUIREMENT REFERS TO THE TOTAL AREA VEGETATED AND NOT JUST A PERCENT OF THE SITE.
- ALL PERMANENT SEDIMENT CONTROL MEASURES CAN BE REMOVED AFTER THE SITE IS PERMANENTLY STABILIZED AND APPROVAL IS RECEIVED FROM THE WVDEP.
- ANY AREAS DISTURBED BY REMOVAL OF CONTROLS SHALL BE REPAIRED, STABILIZED, AND PERMANENTLY SEEDDED.
- THE AS-BUILT INFORMATION SHOWN HEREON REFLECTS FIELD DATA COLLECTED RELATING TO THE FINAL GRADING OF THE DISTURBED AREA AS OF JANUARY 11, 2018. NAVITUS ENGINEERING IS NOT RESPONSIBLE FOR ANY CHANGES MADE TO THE SITE AFTER THE ABOVE MENTIONED DATES.
- THE EXISTING CONTAINMENT BERM AROUNDING THE WELL PAD SHALL BE REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.
- THE EXISTING EGRESSIBLE TO THE WELL PAD SHALL HAVE THE MOUNTABLE BERMS REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.

MOUNDSVILLE USGS 7.5 QUAD MAPS



WEST VIRGINIA STATE PLANE COORDINATE SYSTEM
ELEVATION BASED ON NAVD83
ESTABLISHED BY STURVEY GRADE OPE & OPUS
POST-PROCESSING

RUTH KELLER LIMITS OF DISTURBANCE AREA (AC)			
Total Site	Permitted	Modification	Total
Access Road	0.50	0.00	0.50
Well Pad	4.30	0.00	4.30
Topsoil Stockpiles	1.77	0.21	1.98
Total Affected Area	6.57	0.21	6.78
Impacts to Wv. Rt. 86 RW			
Access Road	0.03	0.00	0.03
Total Affected Area	0.03	0.00	0.03
Impacts to Ruth Ann Keller & David K. Cook TM 13-50-2			
Access Road	0.18	0.00	0.18
Well Pad	0.18	0.00	0.18
Total Affected Area	0.34	0.00	0.34
Impacts to Ruth Ann Keller & David K. Cook TM 13-4-50			
Access Road	0.31	0.00	0.31
Well Pad	4.12	0.00	4.12
Topsoil Stockpiles	1.77	0.21	1.98
Total Affected Area	6.20	0.21	6.41

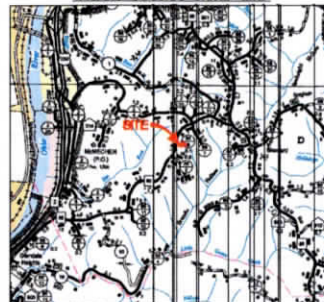
Well Name	Elev.	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long DMS	NAD 83 Lat & Long DD
Ruth Keller MSH 3H B1 (Drilled) PW 47-051-0101	1,237.42'	N 543292.25	N 543328.79	N 4429200.37	LAT 36 50 06.0670 E 1804838.14	LAT 39 095674 LONG -80 41 43 2915 LONG -80.695912

WEST VIRGINIA COUNTY MAP



(NOT TO SCALE)

WVDOH COUNTY ROAD MAP



SCALE: 1" = 5000'

AS-BUILT CERTIFICATIONS:

THE DRAWINGS, CONSTRUCTION NOTES AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CERS 36-6.

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two
business days before you dig in
the state of West Virginia.
IT'S THE LAW!!

REPRODUCTION NOTE

THESE PLANS WERE CREATED TO BE PLOTTED ON 24"x36" (ANSI D) PAPER. HALF SCALE DRAWINGS ARE ON 11"x17" (ANSI B) PAPER.

THESE PLANS WERE CREATED FOR COLOR PLOTTING AND ANY REPRODUCTIONS IN GRAY SCALE OR COLOR MAY RESULT IN A LOSS OF INFORMATION AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.

SHEET INDEX:

- COVER SHEET
- LEGEND
- VICINITY MAP
- OVERALL PLAN SHEET INDEX
- ACCESS ROAD & WELL PAD AS-BUILT PLAN
- ACCESS ROAD AS-BUILT PROFILES & WELL PAD AS-BUILT SECTIONS
- WELL PAD AS-BUILT SECTIONS
- CONSTRUCTION DETAILS
- WELL PAD RECLAMATION PLAN

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COVER SHEET

RUTH KELLER
WELL PAD

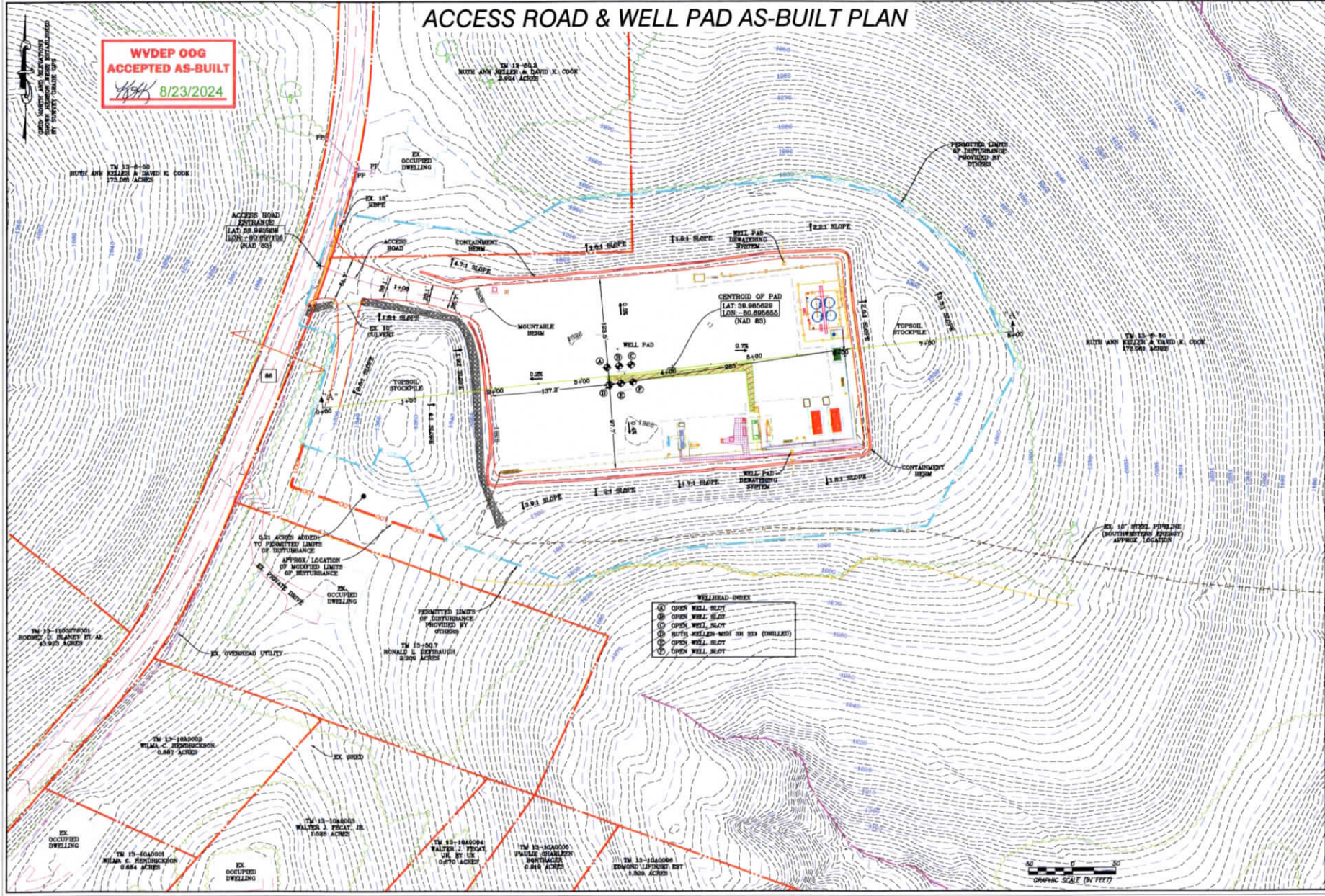
UNION DISTRICT
MARSHALL COUNTY, WEST VIRGINIA



DATE: 02/05/2018
SCALE AS SHOWN
SHEET 1 OF 12

ACCESS ROAD & WELL PAD AS-BUILT PLAN

**WVDEP OOG
ACCEPTED AS-BUILT**
8/23/2024



- WELLHEAD INDEX**
- ① OPEN WELL HEAD
 - ② OPEN WELL SLOT
 - ③ OPEN WELL SLOT
 - ④ RUTH KELLER WMS H# 125 H# 125 (SHUT-IN)
 - ⑤ OPEN WELL SLOT
 - ⑥ OPEN WELL SLOT
 - ⑦ OPEN WELL SLOT

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RUTH KELLER
WELL PAD
UNION DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

DATE: 02/05/2018
SCALE: 1" = 50'
SHEET 6 OF 12