



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

Monday, March 29, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for GLADYS BRIGGS MSH 5H
47-051-02370-00-00

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

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

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

A blue ink signature of James A. Martin, written in a cursive style, is positioned above his name and title.

James A. Martin
Chief

Operator's Well Number: GLADYS BRIGGS MSH 5H
Farm Name: GLADYS R. BRIGGS ESTATE
U.S. WELL NUMBER: 47-051-02370-00-00
Horizontal 6A New Drill
Date Issued: 3/29/2021

Promoting a healthy environment.

04/02/2021

PERMIT CONDITIONS

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

CONDITIONS

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

API Number: _____

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

04/02/2021

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-MARsha 4-Liberty 278-Cameron
Operator ID County District Quadrangle

2) Operator's Well Number: Gladys Briggs MSH 5H Well Pad Name: Gladys Briggs MSH pad

3) Farm Name/Surface Owner: Gladys R. Briggs Estate Public Road Access: Fish Creek Road

4) Elevation, current ground: 1383' Elevation, proposed post-construction: 1383'

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

(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Up-Dip well to the North, Target Top TVD- 7126', Target Base TVD- 7168', Anticipated Thickness- 42', Associated Pressure- 4659

8) Proposed Total Vertical Depth: 7153' /

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,504' /

11) Proposed Horizontal Leg Length: 8882.82' /

12) Approximate Fresh Water Strata Depths: 732' /

13) Method to Determine Fresh Water Depths: Salinity Profile Analysis and offset water wells

14) Approximate Saltwater Depths: 1220' Salinity Profile /

15) Approximate Coal Seam Depths: 1099'

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

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

(a) If Yes, provide Mine Info: Name: Marshall County Coal Resources, Inc.
Depth: 1099'
Seam: Pittsburgh
Owner: American Consolidated Natural Resources

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	126'	126' ✓	CTS
Fresh Water	13 3/8"	New	H-40	48#	802'	802' ✓	750 sx/CTS ✓
Coal	See	Interm	Casing				
Intermediate	9 5/8"	New	J/K-55	40#	2622'	2622' ✓	1008 sx/CTS ✓
Production	5 1/2"	New	P-110 HP	20#	20504'	20504' ✓	Tail 3671sx/100' Inside Intermediate ✓
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.20/30% Excess
Fresh Water	13 3/8"	17.5"	0.380	2730	633	Class A	1.20/30% Excess
Coal	See	Interm	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/40% Excess
Production	5 1/2"	8 3/4"-8 1/2"	0.361	14360	10500	Class A	1.19/5% Excess ✓
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

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

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

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. In some instances, additional toe prep may be performed by pumping additional water in the toe of the well prior to perforating and pumping Stage 1 to ensure that the toe guns/toe sleeves are fully open prior to pumping stage 1. The well is produced through surface facilities consisting of high pressure production unites, horizontal separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 8.4

22) Area to be disturbed for well pad only, less access road (acres): 4.9

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

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

04/02/2021

Southwestern Energy Company

Proposed Drilling Program

Well: **GLADYS BRIGGS MSH 5**
 Field: **VICTORY FIELD WET**
 County: **MARSHALL**
 SHL: **39.7672 Latitude -80.6158 Longitude**
 BHL: **39.7974 Latitude -80.6395 Longitude**
 KB Elev: **1,409 ft MSL**

Re-entry Rig: **TBD**
 Prospect: **Marcellus Shale**
 State: **WV**
 KB: **26 ft AGL**
 GL Elev: **1,383 ft MSL**



No COAL VOID Anticipated

Gas Storage Interval : 1,991' - 2,492' (Maxton, Big Injun)

PROD TOC Lead @ 2,822' MD

PROD TOC Tail @ 6,457' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	126'
Surface	13.375	48.0 #	H-40	0'	802'
Intm/Coal	9.625	40.0 #	J/K-55	0'	2,622'
Production	5.5	20.0 #	P-110 HP	0'	20,504'

126' to 822'
Air/Mist

822' to 1,800'
Air/Mist

1,800' to 2,642'
10.5# WBM

2,642' to 6,557'
Air/Mist

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	750	A	15.6
Intermediate:	1008	A	15.6-16.0
Production:	3671	A	15.6

Air
TD at 6,557'

6,557' to 7,744'
12.0-12.2 ppg

KOP at 6,557' MD

Freshwater Depth - 732' TVD

Coal Depth - 1,099' TVD

Saltwater Depth - 1,220' TVD

TVD - 7,153'

TMD - 20,504'

7,153' Target Center

TD at 20,504' MD
7,105' TVD

EOB at 7,744' MD

SHL Onondaga 7,168' TVD

Onondaga 7,120' TVD

7,744' to 20,504'
12.2-13.0 ppg

Briggs MSH 5H AOR

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
051-00431-P	The Manufacturers Light & Heat Company - 800 Union Trust Bldg. Pittsburgh PA	Plugged	***	***	2347'	Big Injun Sand	
051-00347	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	2205'	Big Injun Sand	
051-00977-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1472'	Unknown	
051-01003-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1665'	Unknown	
051-01004-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1733'	Unknown	
Briggs MSH 5H	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1995'	Unknown	
051-00992-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	2156'	Unknown	
051-00110-P	Carnegie Production Company	Plugged	***	***	3281'	Unknown	
051-00973-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	2143'	Unknown	
051-00960-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1314'	Unknown	
051-00887-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1377'	Unknown	
051-00622-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	2751'	Unknown	
051-00933-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1369'	Unknown	
051-00934-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1457'	Unknown	
051-00901-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	3041'	Unknown	
051-00393-P	Consolidation Coal Company, River Operations, Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	1990'	Unknown	
051-00614-P	McElroy Coal Company Rd #4, Box 425, Moundsville, WV 26041	Plugged	***	***	2431'	Unknown	
051-70434	Unknown	Unknown	***	***	Unknown	Unknown	
051-30071-A	Unknown	Abandoned	***	***	2970'	Unknown	
051-70446	Unknown	Unknown	***	***	Unknown	Unknown	
051-30500-A	The Manufacturers Light & Heat Company - 800 Union Trust Bldg. Pittsburgh PA	Abandoned	***	***	Unknown	Unknown	
051-70578	Unknown	Unknown	***	***	Unknown	Unknown	
051-70601	Unknown	Unknown	***	***	Unknown	Unknown	
051-70602	Unknown	Unknown	***	***	Unknown	Unknown	
051-70617	Unknown	Unknown	***	***	Unknown	Unknown	
051-70616	Unknown	Unknown	***	***	Unknown	Unknown	

**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) Fish Creek Quadrangle Cameron

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Attachment 3B

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

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

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

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

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

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

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

Company Official Signature *Brittany Woody*

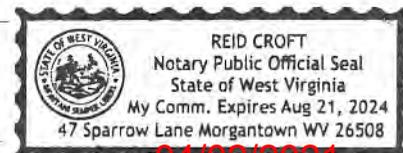
Company Official (Typed Name) Brittany Woody

Company Official Title Senior Regulatory Analyst

Subscribed and sworn before me this 22nd day of February, 2021

Reid Croft Notary Public

My commission expires August 21, 2024



04/02/2021

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 8.4 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 4.9

Fertilizer type 10-20-20

Fertilizer amount 600/500 lbs/acre

Mulch Hay/Straw Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Attachment 3C

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: Oil & Gas Inspector Date: _____

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

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

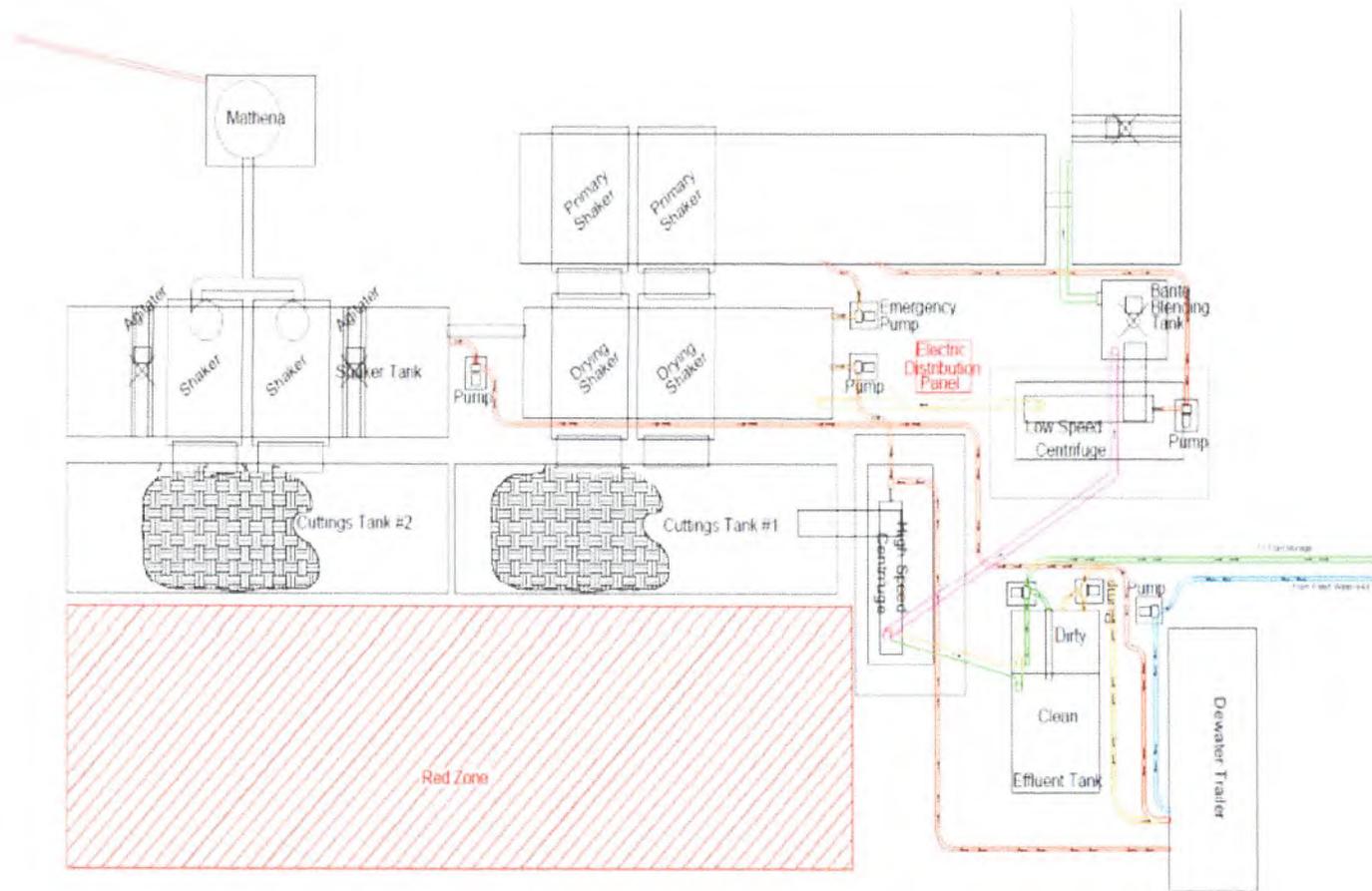
AIR DRILLING INTERVALS

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

LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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

Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM

Attachment 3B

Drilling Mediums

Surface/Coal(if present)/Freshwater Intervals:

Air

Freshwater (if needed based on conditions)

Intermediate/Coal (if present):

Air

Production Hole:

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers



WVD Seeding Specification

$\frac{R^2}{A} \rightarrow V^+$

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

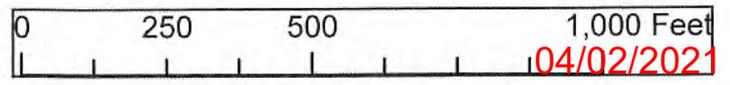
NON-ORGANIC PROPERTIES		ORGANIC PROPERTIES	
Seed Mixture: ROW Mix	SWN Supplied	Seed Mixture: SWN Production Organic Mix	SWN Supplied
Orchardgrass	40%	Organic Timothy	50%
Timothy	15%	Organic Red or White Clover	50%
Annual Ryegrass	15%	OR	
Brown Top Millet	5%	Organic Perennial Ryegrass	50%
Red Top	5%	Organic Red or White Clover	50%
Medium Red Clover	5%	Apply @ 100lbs per acre	Apply @ 200lbs per acre
White Clover	5%	April 16th- Oct. 14th	Oct. 15th- April 15th
Birdsfoot Trefoil	5%	Organic Fertilizer @ 200lbs per Acre	Pelletized Lime @ 2 Tons per Acre
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	
All legumes are inoculated at 5x normal rate			
SOIL AMENDMENTS		WETLANDS (delineated as jurisdictional wetlands)	
10-20-20 Fertilizer	*Apply @ 500lbs per Acre	Seed Mixture: Wetland Mix	SWN Supplied
Pelletized Lime	Apply @ 2 Tons per Acre	VA Wild Ryegrass	20%
*unless otherwise dictated by soil test results		Annual Ryegrass	20%
Seeding Calculation Information:		Fowl Bluegrass	20%
1452' of 30' ROW/LOD is One Acre		Cosmos 'Sensation'	10%
871' of 50' ROW/LOD is One Acre		Redtop	5%
622' of 70' ROW/LOD is One Acre		Golden Tickseed	5%
Synopsis:		Maryland Senna	5%
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).		Showy Tickseed	5%
Special Considerations:		Fox Sedge	2.5%
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.		Soft Rush	2.5%
		Woolgrass	2.5%
		Swamp Verbena	2.5%
		Apply @ 25lbs per acre	Apply @ 50lbs per acre
		April 16th- Oct. 14th	Oct. 15th- April 15th
		NO FERTILIZER OR LIME INSIDE WETLAND LIMITS	



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

Legend

- Gladys Briggs MSH Pad1
- 1000ft Buffer
- Marshall County Mine



04/02/2021

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

API NO. 47-XXX-XXXXX
WELL NAME: Gladys Briggs MSH 5H
Cameron QUAD
Liberty DISTRICT
MARSHALL COUNTY, WEST VIRGINIA

Submitted by:

Name: Brittany Woody

Date: 2/4/2021

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: _____

Date: _____

Title: _____

Approved by:

Name: _____

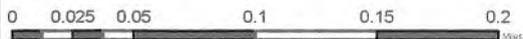
Date: _____

Title: _____



N

 1 in = 417 ft



Coordinate System: NAD 1983 UTM Zone 17N
 Units: Meter

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

Water Purveyor Map
 Well Pad: Gladys Briggs
 County: MSH

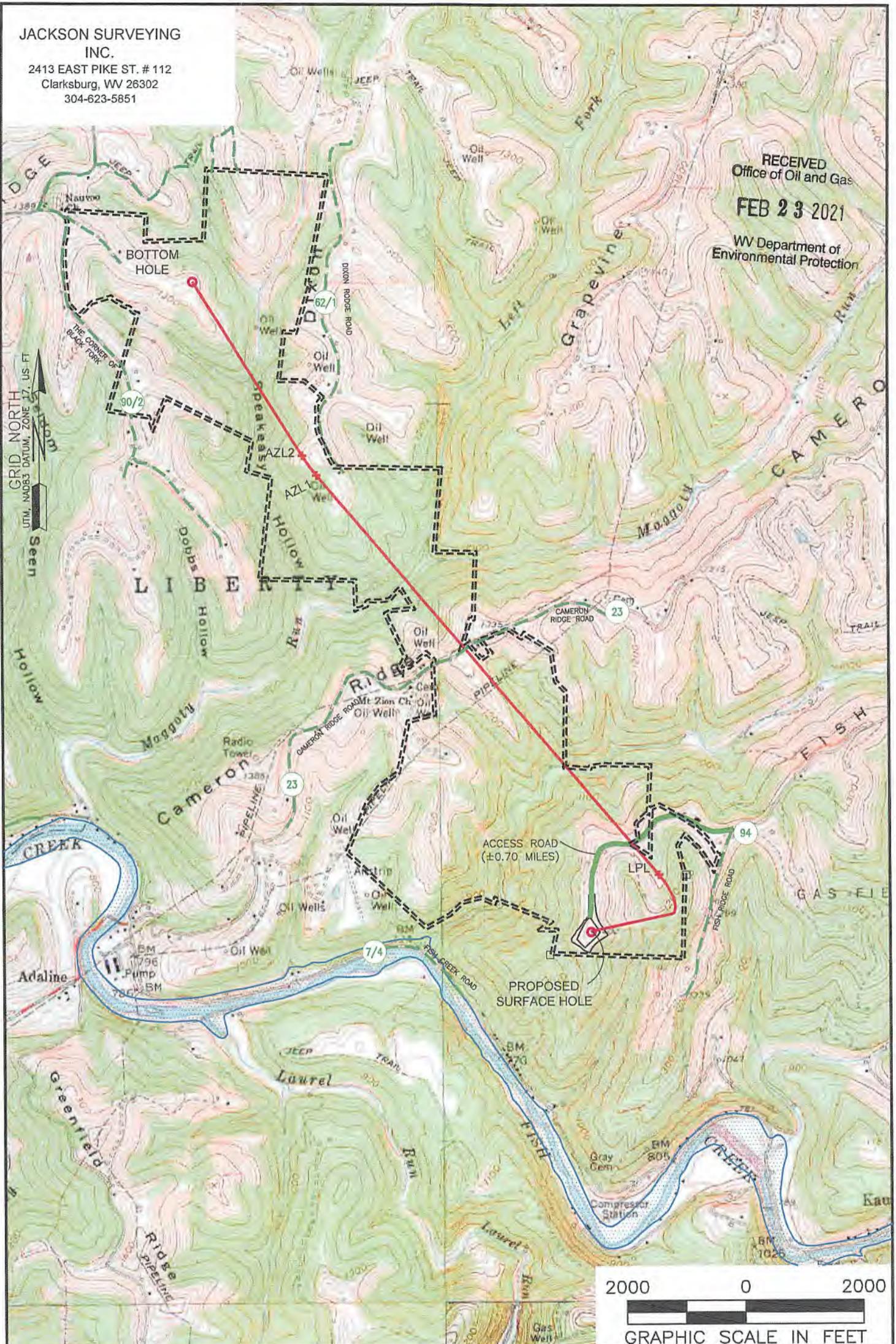
swn *Rev+*
 Southwestern Energy®
 04/02/2021

Coordinates: 39.767174, -80.615895

Date: 1/13/2021 | Author: willisb

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

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NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS 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
- == ACCESS ROAD TO PREV. SITE
- === LEASE BOUNDARY
- PROPOSED PATH

04/02/2021

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: GLADYS BRIGGS MSH	WELL # 5H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200, MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT; LIBERTY	
SURFACE OWNER: GLADYS R. BRIGGS ESTATE	USGS 7 1/2 QUADRANGLE MAP NAME CAMERON, WV		

Latitude: 39°47'30"

SURFACE HOLE 9122'

BOTTOM HOLE 4,063'

Latitude: 39°50'00"

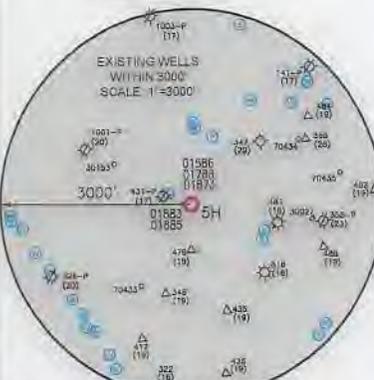
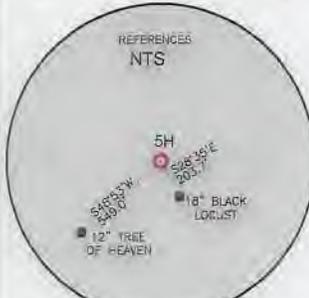
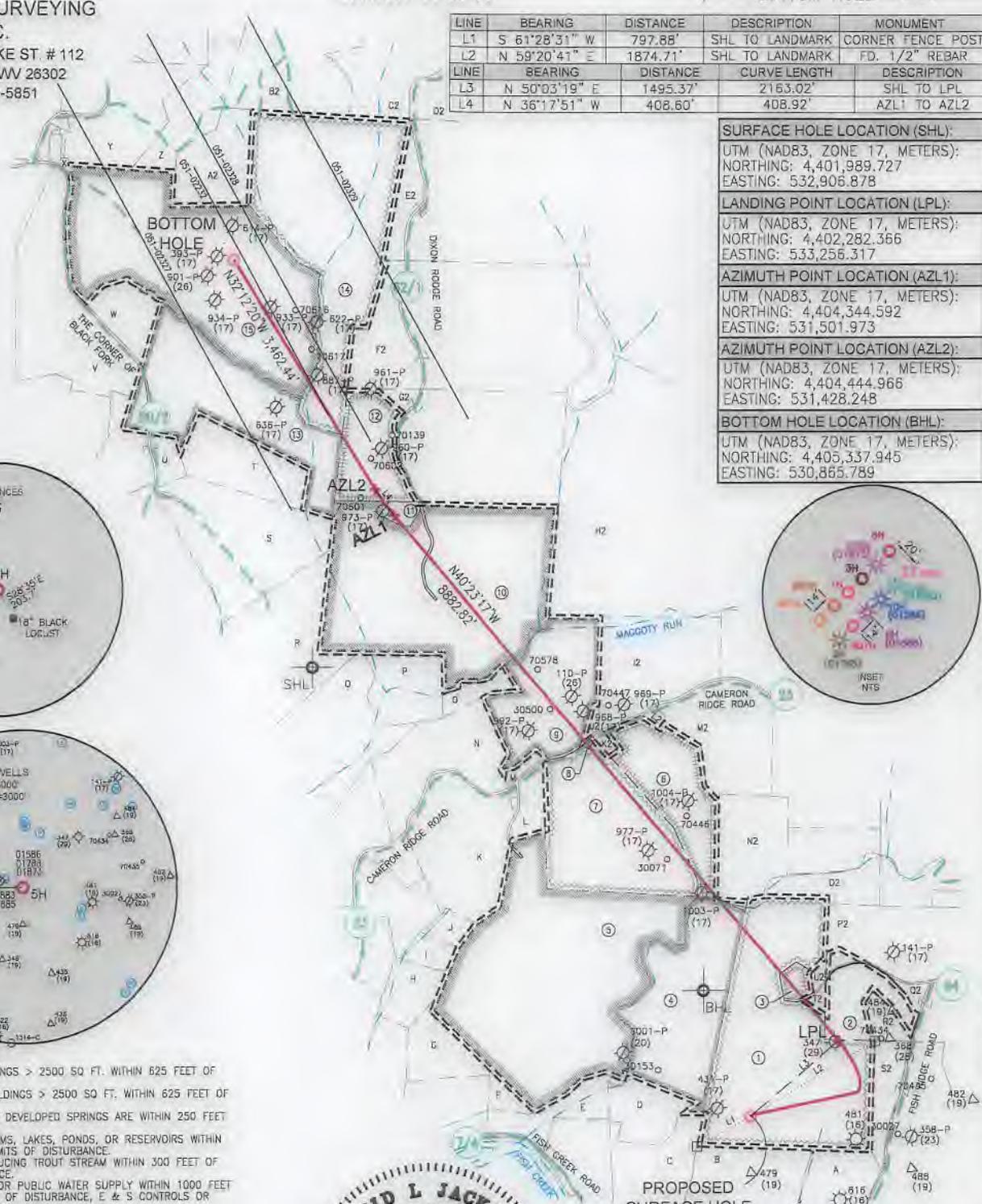
JACKSON SURVEYING INC.

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

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	S 61°28'31" W	797.88'	SHL TO LANDMARK	CORNER FENCE POST
L2	N 59°20'41" E	1874.71'	SHL TO LANDMARK	FD, 1/2" REBAR
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 50°03'19" E	1495.37'	2163.02'	SHL TO LPL
L4	N 36°17'51" W	408.60'	408.92'	AZL1 TO AZL2

SURFACE HOLE LOCATION (SHL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,401,989.727
	EASTING: 532,906.878
LANDING POINT LOCATION (LPL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,402,282.366
	EASTING: 533,256.317
AZIMUTH POINT LOCATION (AZL1):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,404,344.592
	EASTING: 531,501.973
AZIMUTH POINT LOCATION (AZL2):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,404,444.966
	EASTING: 531,428.248
BOTTOM HOLE LOCATION (BHL):	
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,405,337.945
	EASTING: 530,865.789

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



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

- NOTES ON SURVEY**
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - 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	MINIMUM DEGREE OF ACCURACY: 1/200	GLADYS BRIGGS MSH
	WVDEP OFFICE OF OIL & GAS 801 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	OPERATOR'S WELL #: 5H
			API WELL #: 47 STATE, 051 COUNTY, 02370 PERMIT

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

WATERSHED: FISH CREEK (HUC-10) ELEVATION: 1382.7'

DISTRICT: LIBERTY COUNTY: MARSHALL QUADRANGLE: CAMERON 7 1/2', WV

SURFACE OWNER: GLADYS R. BRIGGS ESTATE ACREAGE: ±121.429

OIL & GAS ROYALTY OWNER: GLADYS R. BRIGGS ESTATE ACREAGE: ±121.429

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: 7,153 TVD 20,504 TMD

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

DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	<ul style="list-style-type: none"> PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD LANDING POINT LOCATION EXISTING WATER WELL EXISTING SPRING 	<ul style="list-style-type: none"> SURVEYED BOUNDARY DRILLING UNIT LEASE BOUNDARY PROPOSED PATH AZL x AZIMUTH POINT LOCATION 	REVISIONS: DATE: 01-25-2021 DRAWN BY: N. MANO SCALE: 1" = 2000' DRAWING NO: WELL LOCATION PLAT
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JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
 304-623-5851

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	BRIGGS GLADYS R EST (S/R)	07-16-02
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	YEATER PRESTON & HEATHER L (S)	07-16-29.4
3	YEATER PRESTON A ET UX (S)	07-16-16.1
4	CONSOL MINING COMPANY LLC ATTN: LAND ADMIN/PROPERTY TAX (S)	07-10-08
5	BUZZARD DONALD G ET UX (S)	07-10-07
6	CLARK CHARLES R & WHIPKEY MARILYN V (S)	07-10-05
7	ANDERSON ALVIN RICKEY ET AL (S)	07-10-06
8	STERN DONALD G ET AL (S)	07-10-6.1
9	CLARK CHARLES R (S)	07-10-01
10	KASSERMAN RONALD WM (S)	07-08-09
11	FIFE HOWARD C - LIFE - DOWNING STEVEN D (S)	07-08-9.1
12	STERN BLAINE E JR (S)	07-08-12
13	DOBBS JOHN ALFRED & LEORA - LIFE (S)	07-08-04
14	KERNS DANNY R & FRANCES V ESTS (S)	07-08-02
15	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT (S)	09-12-14

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	BRIGGS JACK J	07-16-05
B	MASON DIXON FARMS LLC	07-16-06
C	MASON DIXON FARMS LLC	07-17-19.1
D	MASON DIXON FARMS LLC	07-17-19
E	SIMMS ROBERT S & SHELIA D	07-17-18
F	MCCULLEY BETTY TAYLOR ET VIR	07-17-17
G	MCCULLEY BETTY TAYLOR ET VIR	07-17-14
H	MCCULLEY BETTY TAYLOR ET VIR	07-09-34
I	MCCULLEY BETTY TAYLOR ET VIR	07-09-33
J	BERNAS JOSEPH C	07-09-32
K	BUZZARD DONALD G ET UX	07-09-28
L	ASTON PAUL & SUSAN	07-09-26
M	NOULLET BENJAMIN R & CARLA J	07-10-1.1
N	CLARK CHARLES R & WHIPKEY MARILYN V	07-09-28.2
O	HINERMAN MARK P & SHELLI W DANNER	07-09-25
P	DOBBS GARY L	07-09-24
Q	ASTON PAUL & SUSAN	07-09-21
R	DOBBS JOHN ALFRED & LEORA - LIFE	07-09-23
S	DOBBS JOHN ALFRED & LEORA - LIFE	07-08-08
T	DOBBS JOHN ALFRED & LEORA - LIFE	07-08-05
U	WHIPKEY DAVID & CAROL TRUSTR; KELLEY ELIZABETH J; HAGIN RANDOLPH EUGENE	09-12-17
V	WHIPKEY DAVID L & DAVID MATTHEW	09-12-12
W	WHIPKEY DAVID L & DAVID MATTHEW	09-12-15
X	LATTER DAY SAINTS CHURCH	09-09-15
Y	KERNS DANNY R & FRANCES V ESTS	09-09-14
Z	KERNS DANNY R & FRANCES V ESTS	09-09-13
A2	KERNS DANNY R & FRANCES V ESTS	07-08-01
B2	KERNS DANNY R & FRANCES V ESTS	07-01-03
C2	CONSOLIDATION COAL COMPANY MURRAY ENERGY C/O LAND DEPT	07-01-04
D2	EVANS KAREN S & MATTHEWS JUDY M	07-01-05
E2	BURRIS GEO A ET AL	07-08-14
F2	STERN BLAINE E JR	07-08-13
G2	STERN BLAINE E JR	07-08-11
H2	GRAHAM WAYNE E JR ET UX	07-07-04
I2	CLARK CHARLES R & WHIPKEY MARILYN V	07-10-04
J2	SCHWING RICKY	07-10-02
K2	STERN PAUL F	07-10-03
L2	CLARK CHARLES R & WHIPKEY MARILYN V	07-10-4.1
M2	CLARK CHARLES R & WHIPKEY MARILYN V	07-10-12
N2	CLARK CHARLES R & WHIPKEY MARILYN V	07-10-11
O2	CLARK JAMES M	07-10-09
P2	LEMASTERS VINCENT E	07-10-24
Q2	YEATER THELMA - LIFE	07-16-29
R2	YEATER PRESTON A ET UX	07-16-29.2
S2	BRIGGS GLADYS R EST	07-16-03
T2	BRIGGS JACK	07-16-2.1
U2	BRIGGS PATTY K	07-16-2.2

04/02/2021

REVISIONS:	COMPANY:		
	OPERATOR'S	GLADYS BRIGGS MSH	DATE: 01-25-2021
	WELL #:	47-051-02370 5H	DRAWN BY: N. MANO
	DISTRICT:	LIBERTY	SCALE: N/A
	COUNTY:	MARSHALL	DRAWING NO:
	STATE:	WV	WELL LOCATION PLAT 2

4705102370

WW-6A1
(5/13)

Operator's Well No. Briggs MSH 5H

✓ 3/26/21
WS

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

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

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

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

See Exhibit "A"

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Office of Oil and Gas

FEB 23 2021

WV Department of
Environmental Protection

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

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

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

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

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

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

EXHIBIT "A"

705102370

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 Gladys Briggs 5H Marshall County, West Virginia

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
1	7-16-2	David Bonars, single, Harrison J. Briggs and Gladys R. Briggs, his wife	The Manufacturers Light and Heat Company	12.50%	309/354	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
2	7-16-29.4	James M. Rine & Mary B. Rine, his wife, and Frank Hopkins & Austia M. Hopkins, his wife	E.C. Beardsley	15.00%	137/429	0.0000%
		E.C. Beardsley	The Wheeling Natural Gas Company		150/49	
		The Wheeling Natural Gas Company	The Manufacturers Light and Heat Company		148/389	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
3	7-16-16.1	James M. Rine & Mary B. Rine, his wife, and Frank Hopkins & Austia M. Hopkins, his wife	E.C. Beardsley	15.00%	137/429	0.0000%
		E.C. Beardsley	The Wheeling Natural Gas Company		150/49	
		The Wheeling Natural Gas Company	The Manufacturers Light and Heat Company		148/389	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
4	7-10-8	Columbia Gas Transmission Corporation	Chesapeake Appalachia, L.L.C.	12.500%	353/451	0.0000%
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		36/422	
5	7-10-7	*Royalty Owner	n/a	n/a	n/a	0.2976%
		Thomas Lamont Buzzard, et al	The Manufacturers Light and Heat Company	12.500%	353/451	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		James Robert Elson, a/k/a James R. Elson, a married man dealing in his sole and separate property	Chesapeake Appalachia, L.L.C.	17.000%	734/31	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Vicki L. Magruder, a/k/a Vicki Lynn Elson, a/k/a Vicki Lynn Elson Magruder, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17.000%	734/21	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Karen R. Haught Brown, a/k/a Karen Rose Brown, a/k/a Karen Rose Haught Brown, a/k/a Karen Rose Haught, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17.000%	734/16	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Marilyn Carney and Robert Carney, her husband	Chesapeake Appalachia, L.L.C.	17.000%	736/384	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		David Shank and Donna Shank, his wife	Chesapeake Appalachia, L.L.C.	17.000%	736/389	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		James Nelson Shank, a single man, by his Attorney-In-Fact, Margaret R. Conner, a/k/a Margaret Ruth Conner	Chesapeake Appalachia, L.L.C.	17.000%	737/209	
Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110			
Paul Shank, a/k/a Paul W. Shank, Sr. and Gertrude Shank, his wife	Chesapeake Appalachia, L.L.C.	17.000%	740/587			

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WV Department of
Environmental Protection

04/02/2021

EXHIBIT "A"

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

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Margaret Ruth Conner and Paul Conner Jr., her husband	Chesapeake Appalachia, L.L.C.	17.000%	740/527	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Sue Conner and Clyde Conner, her husband	Chesapeake Appalachia, L.L.C.	17.000%	738/268	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
6	7-10-5	Ben Kingree, III and Sarah Jane Kingree, husband and wife, Alexander Foster Reynolds and Edith Reynolds, husband and wife, and Alexander Foster Reynolds, as Committee for Arthur Reynolds, an incompetent person, and Gladys Reynolds, wife of Arthur Reynolds	The Manufacturers Light and Heat Company	13.750%	361/295	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
7	7-10-6	*Royalty Owner	n/a	n/a	n/a	4.9917%
		Sondra Nemeth, a widow	Chesapeake Appalachia, L.L.C.	16.00%	849/504	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Charlene H. McCoy and Hugh E. McCoy, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/242	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Leigh Ann Ryan, f/k/a Leigh Ann Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	841/407	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Kathleen S. Hoeweler	Chesapeake Appalachia, L.L.C.	15.00%	841/401	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Jane Marie Alexander Williams	Chesapeake Appalachia, L.L.C.	15.00%	840/238	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Judith Sanchez and John Sanchez, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/234	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Deborah L. Broch, f/k/a Deborah L. Alexander	Chesapeake Appalachia, L.L.C.	15.00%	841/535	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Alan G. Hartman, a single man	Chesapeake Appalachia, L.L.C.	15.00%	840/246	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Thomas J. Hartman and Marcia Hartman, husband and wife	Chesapeake Appalachia, L.L.C.	15.00%	840/254	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		James T. Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	840/250	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Michael C. Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	841/541	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Phillip E. Hartman and Billie D. Hartman, husband and wife	Chesapeake Appalachia, L.L.C.	15.00%	841/547	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Loreen K. Myers, f/k/a Loreen Kay Hartman and Smith Myers, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/260	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Melinda K. Dyson	Chesapeake Appalachia, L.L.C.	15.00%	842/200	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Linda M. Blohm and Robert W. Blohm, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	841/395	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Anita Basinger and John Basinger, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	841/389	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Donna Bland and Joseph Bland, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	846/67	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	

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EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC, Operator Gladys Briggs 5H Marshall County, West Virginia

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Harry E. Reineke, Jr. and Della Reineke, husband and wife	Chesapeake Appalachia, L.L.C.	17.00%	846/110	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Richard Reineke and Charlene Reineke, husband and wife	Chesapeake Appalachia, L.L.C.	18.00%	846/143	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Peggy Lydick McCarroll, a widow	Chesapeake Appalachia, L.L.C.	15.00%	846/86	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Daniel Sculan	Chesapeake Appalachia, L.L.C.	15.00%	846/98	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Deborah Bradley and Anthony Bradley, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	842/213	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Katherine G. Atwell, a widow	Chesapeake Appalachia, L.L.C.	15.00%	846/75	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Patricia Conaway and Donald Conaway, her husband	Chesapeake Appalachia, L.L.C.	15.00%	846/149	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		James H. Reineke and Deborah Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	894/628	
		Andrew Scott Kern, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	16.00%	932/95	
		Barry Dean Kern, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	16.00%	950/13	
		Susan Johnson, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	955/255	
		Pamela Wood, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	955/260	
		Rocky V. Kern, Sr., a single man	SWN Production Company, L.L.C.	16.00%	932/98	
		Judith Reineke, a widow	SWN Production Company, L.L.C.	16.00%	955/323	
		Walter L. Hartman, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	955/318	
		Kenneth L. Stottsberry, widower	SWN Production Company, L.L.C.	16.00%	932/76	
		Margie J. Standiford, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	934/211	
		Roy E. Seitz	SWN Production Company, L.L.C.	16.00%	1052/343	
		Susan L. Hanlin and Paul Hanlin, wife and husband	SWN Production Company, L.L.C.	16.00%	1060/17	
		Christine L. Alexander, a widow	SWN Production Company, L.L.C.	16.00%	1052/334	
		Diana L. Voltz and Mark Voltz, wife and husband	SWN Production Company, L.L.C.	16.00%	1060/22	
		Samantha J. Reineke and Christine L. Reineke, her wife	SWN Production Company, L.L.C.	16.00%	1053/441	
		Scott W. Cooper, single	SWN Production Company, L.L.C.	17.00%	1074/115	
		Garnet C. Vance	SWN Production Company, L.L.C.	17.00%	880/166	
		George W. Reineke, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	895/214	
		Carla Ann Ronca, a/k/a Carla A. Ronca, f/k/a Carla Ann Lazarus, f/k/a Carla Ann Hartman, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	1066/96	
		Judith A. Dean and Gary R. Dean, wife and husband	SWN Production Company, L.L.C.	17.00%	1074/131	
		Kurt L. Reineke and Victoria L. Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	1074/136	
		Linda M. Hickey, f/k/a Linda M. Reineke and Gary Lee Hickey, wife and husband	SWN Production Company, L.L.C.	17.00%	1074/121	
		Aaron A. Cooper, single	SWN Production Company, L.L.C.	17.00%	1074/109	
		Brandon M. Reineke and Jennifer Marie Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	1074/141	
		Helen Lato, f/k/a Helen Reineke, a widow	SWN Production Company, L.L.C.	17.00%	1074/126	
		Jacqueline Anne Reineke, a widow	SWN Production Company, L.L.C.	16.00%	1077/213	
		Roy Groves, single	SWN Production Company, L.L.C.	17.00%	1056/565	

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 Gladys Briggs 5H
 Marshall County, West Virginia

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Randy Groves, married dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	1097/344	
8	7-10-6.1	*Royalty Owner	n/a	n/a	n/a	4.9917%
		Sondra Nemeth, a widow	Chesapeake Appalachia, L.L.C.	16.00%	849/504	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Charlene H. McCoy and Hugh E. McCoy, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/242	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Leigh Ann Ryan, f/k/a Leigh Ann Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	841/407	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Kathleen S. Hoeweler	Chesapeake Appalachia, L.L.C.	15.00%	841/401	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Jane Marie Alexander Williams	Chesapeake Appalachia, L.L.C.	15.00%	840/238	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Judith Sanchez and John Sanchez, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/234	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Deborah L. Broch, f/k/a Deborah L. Alexander	Chesapeake Appalachia, L.L.C.	15.00%	841/535	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Alan G. Hartman, a single man	Chesapeake Appalachia, L.L.C.	15.00%	840/246	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Thomas J. Hartman and Marcia Hartman, husband and wife	Chesapeake Appalachia, L.L.C.	15.00%	840/254	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		James T. Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	840/250	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Michael C. Hamstead	Chesapeake Appalachia, L.L.C.	15.00%	841/541	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Phillip E. Hartman and Billie D. Hartman, husband and wife	Chesapeake Appalachia, L.L.C.	15.00%	841/547	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Loreen K. Myers, f/k/a Loreen Kay Hartman and Smith Myers, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	840/260	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Melinda K. Dyson	Chesapeake Appalachia, L.L.C.	15.00%	842/200	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Linda M. Blohm and Robert W. Blohm, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	841/395	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	

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Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Anita Basinger and John Basinger, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	841/389	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Donna Bland and Joseph Bland, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	846/67	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Harry E. Reineke, Jr. and Della Reineke, husband and wife	Chesapeake Appalachia, L.L.C.	17.00%	846/110	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Richard Reineke and Charlene Reineke, husband and wife	Chesapeake Appalachia, L.L.C.	18.00%	846/143	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Peggy Lydick McCarroll, a widow	Chesapeake Appalachia, L.L.C.	15.00%	846/86	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Daniel Siculan	Chesapeake Appalachia, L.L.C.	15.00%	846/98	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Deborah Bradley and Anthony Bradley, wife and husband	Chesapeake Appalachia, L.L.C.	15.00%	842/213	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Katherine G. Atwell, a widow	Chesapeake Appalachia, L.L.C.	15.00%	846/75	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		Patricia Conaway and Donald Conaway, her husband	Chesapeake Appalachia, L.L.C.	15.00%	846/149	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		35/32	
		James H. Reineke and Deborah Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	894/628	
		Andrew Scott Kern, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	16.00%	932/95	
		Barry Dean Kern, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	16.00%	950/13	
		Susan Johnson, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	955/255	
		Pamela Wood, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	955/260	
		Rocky V. Kern, Sr., a single man	SWN Production Company, L.L.C.	16.00%	932/98	
		Judith Reineke, a widow	SWN Production Company, L.L.C.	16.00%	955/323	
		Walter L. Hartman, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	955/318	
		Kenneth L. Stottsberry, widower	SWN Production Company, L.L.C.	16.00%	932/76	
		Margie J. Standford, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	16.00%	934/211	
		Roy E. Seitz	SWN Production Company, L.L.C.	16.00%	1052/343	
		Susan L. Hanlin and Paul Hanlin, wife and husband	SWN Production Company, L.L.C.	16.00%	1060/17	
		Christine L. Alexander, a widow	SWN Production Company, L.L.C.	16.00%	1052/334	
		Diana L. Voltz and Mark Voltz, wife and husband	SWN Production Company, L.L.C.	16.00%	1060/22	

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Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Samantha J. Reineke and Christine L. Reineke, her wife	SWN Production Company, L.L.C.	16.00%	1053/441	
		Scott W. Cooper, single	SWN Production Company, L.L.C.	17.00%	1074/115	
		Garnet C. Vance	SWN Production Company, L.L.C.	17.00%	880/166	
		George W. Reineke, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	895/214	
		Carla Ann Ronca, a/k/a Carla A. Ronca, f/k/a Carla Ann Lazarus, f/k/a Carla Ann Hartman, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	1066/96	
		Judith A. Dean and Gary R. Dean, wife and husband	SWN Production Company, L.L.C.	17.00%	1074/131	
		Kurt L. Reineke and Victoria L. Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	1074/136	
		Linda M. Hickey, f/k/a Linda M. Reineke and Gary Lee Hickey, wife and husband	SWN Production Company, L.L.C.	17.00%	1074/121	
		Aaron A. Cooper, single	SWN Production Company, L.L.C.	17.00%	1074/109	
		Brandon M. Reineke and Jennifer Marie Reineke, husband and wife	SWN Production Company, L.L.C.	17.00%	1074/141	
		Helen Lato, f/k/a Helen Reineke, a widow	SWN Production Company, L.L.C.	17.00%	1074/126	
		Jacqueline Anne Reineke, a widow	SWN Production Company, L.L.C.	16.00%	1077/213	
		Roy Groves, single	SWN Production Company, L.L.C.	17.00%	1056/565	
		Randy Groves, married dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	1097/344	
9	7-10-1	Hilda Pell Sinco and Michael Sinco, her husband; Alexander Foster Reynolds, Ada Reynolds, and Alexander Foster Reynolds as Committee for Arthur Reynolds, an incompetent person	The Manufacturers Light and Heat Company	14.00%	363/455	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		S.N. Cole & Ida Cole, his wife	Carnegie Natural Gas Company	12.50%	186/269	0.0000%
		Carnegie Natural Gas Company	The Manufacturers Light and Heat Company		3/93	
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
10	7-8-9	William Woodburn and Ann B. Woodburn, his wife	The Manufacturers Light and Heat Company	12.50%	381/385	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
11	7-8-9.1	William Woodburn and Ann B. Woodburn, his wife	The Manufacturers Light and Heat Company	12.50%	381/385	0.0000%
		The Manufacturers Light and Heat Company	Columbia Gas Transmission Corporation		422/204	
		Columbia Gas Transmission Corporation	Columbia Natural Resources, LLC		642/281	
		Columbia Natural Resources, LLC	Chesapeake Appalachia, L.L.C.		650/63	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	

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Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
12	7-8-12	*Royalty Owner	n/a	n/a	n/a	12.7976%
		Ronald W. Kerns, a single man	Chesapeake Appalachia, L.L.C.	12.50%	726/27	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Mary L. Logsdon, a widow	Chesapeake Appalachia, L.L.C.	17.00%	758/138	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Patricia A. Cecil and Wylie J. Cecil, her husband	Chesapeake Appalachia, L.L.C.	17.00%	758/156	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Cynthia L. Hippensteal and Richard T. Hippensteal, her husband	Chesapeake Appalachia, L.L.C.	17.00%	771/545	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Heidi J. Walton, a single woman	Chesapeake Appalachia, L.L.C.	17.00%	771/539	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Jill E. Chuss, a married woman dealing in her sole and separate property	Chesapeake Appalachia, L.L.C.	17.00%	774/206	
		Chesapeake Appalachia, L.L.C.	SWN Production Company, LLC		33/110	
		Sara L. Clayton, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	919/361	
		J. Russell Logsdon, divorced	SWN Production Company, L.L.C.	17.00%	926/285	
		Donna Faye Earnest, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	926/579	
		William N. Logsdon, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	926/582	
		Sharee Sams, a single woman	SWN Production Company, L.L.C.	17.00%	926/282	
		Charles W. Dobbins, Sr., a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	17.00%	932/89	
		Joann I. Dobbs, a widow	SWN Production Company, L.L.C.	17.00%	932/83	
		Walter B. Dobbs, divorced and not remarried	SWN Production Company, L.L.C.	17.00%	932/633	
		Michael T. Boggs, a single man	SWN Production Company, L.L.C.	15.00%	944/274	
		Russell A. Boggs, a married man dealing in his sole and separate property	SWN Production Company, L.L.C.	15.00%	932/73	
		Robert E. Boggs, a single man	SWN Production Company, L.L.C.	15.00%	932/92	
		Debra Fairchild, a single woman	SWN Production Company, L.L.C.	17.00%	932/86	
		Robert Larry Long, single	SWN Production Company, L.L.C.	16.00%	1059/61	
		Janice L. Earnest, a widow	SWN Production Company, L.L.C.	17.00%	926/279	
		Shirley E. Burton, a married woman dealing in her sole and separate property	SWN Production Company, L.L.C.	17.00%	926/276	
		Sandra K. Thornhill, a widow	SWN Production Company, L.L.C.	16.00%	1099/553	
13	7-8-4	*Royalty Owner	n/a	n/a	n/a	6.9712%
		Barbara L. Anderson	TH Exploration, LLC	16.00%	1009/114	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
		John Russell Becker	TH Exploration, LLC	18.00%	1008/26	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
		Karen S. Blake	TH Exploration, LLC	19.00%	963/416	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
		Marvin Jerry Blake and Linda D. Blake	TH Exploration, LLC	18.00%	965/509	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
		Brenda Lou Boyd	TH Exploration, LLC	18.00%	1052/500	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
		Frances V. Carpenter, by Attorney-in-Fact Tamara L. Croghan	TH Exploration, LLC	18.00%	983/643	
		TH Exploration, LLC	SWN Production Company, LLC		48/400	
					48/433	

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		Chestnut Holdings, Inc.	TH Exploration, LLC	20.00%	963/483	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Carl J. Chmielewski and Kathleen A. Chmielewski	TH Exploration, LLC	16.00%	984/3	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Joseph F. Chmielewski and Sandra Chmielewski	TH Exploration, LLC	16.00%	984/1	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Glenda Coffield, a/k/a Glenda G. Dobbs, married	TH Exploration, LLC	16.00%	956/126	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Lasrence W. Crow, Jr. and Wanda F. Crow	TH Exploration, LLC	18.00%	984/541	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Ronald L. Crow and Glenda F. Crow	TH Exploration, LLC	18.00%	965/505	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Charles S. Cunningham and Cora J. Cunningham	TH Exploration, LLC	18.00%	962/582	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Dorothy L. Cunningham	TH Exploration, LLC	18.00%	968/266	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		James W. Cunningham, Jr.	TH Exploration, LLC	18.00%	1017/590	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Jordan Lee Cunningham	TH Exploration, LLC	18.00%	1017/588	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Mark A. Cunningham and Joan R. Cunningham	TH Exploration, LLC	18.00%	964/483	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Paul Craig Cunningham	TH Exploration, LLC	18.00%	964/481	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Allen R. L. Davis and Diana Lee Patterson Davis	TH Exploration, LLC	16.00%	984/543	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Brian William Dobbs and Lisa Dobbs	TH Exploration, LLC	18.00%	961/530	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Doris M. Dobbs	TH Exploration, LLC	18.00%	1067/397	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Carlton D. Dobbs, Jr. and Mikhail Prokopeko, married	TH Exploration, LLC	18.00%	943/21; Amended at 957/175	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		David J. Dobbs, single	TH Exploration, LLC	16.00%	956/122	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Edda Jo Dobbs	TH Exploration, LLC	18.00%	1019/479	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Gary B. Dobbs and Peggy Lee Dobbs	TH Exploration, LLC	18.00%	953/545	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Gladys E. Dobbs, widow	TH Exploration, LLC	18.00%	961/522; Amended at 964/492	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Kenneth R. Dobbs	TH Exploration, LLC	18.00%	988/111	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Mary V. Dobbs	TH Exploration, LLC	18.00%	964/479; Amended at 967/208	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	

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 Marshall County, West Virginia

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		Michael R. Dobbs and Leanne Dobbs	TH Exploration, LLC	18.00%	940/238; Amended at 957/307	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Ronald D. Dobbs, married	TH Exploration, LLC	16.00%	956/118	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Sherrill R. Dobbs and Ella V. Dobbs	TH Exploration, LLC	18.00%	1067/408	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		James C. Doria and Deidre G. Doria, husband and wife	TH Exploration, LLC	18.00%	961/526	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Jean R. Erasmus and John T. Erasmus	TH Exploration, LLC	18.00%	974/194	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Melvin J. Francis	TH Exploration, LLC	18.00%	960/113	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Carroll W. Frazier	TH Exploration, LLC	18.00%	1053/7	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Donald A. Frazier	TH Exploration, LLC	18.00%	1034/581	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Elbert Robert Frazier	TH Exploration, LLC	18.00%	1058/393	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Larry D. Frost and Lorraine L. Frost	TH Exploration, LLC	18.00%	1026/217	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Suzanne Frost	TH Exploration, LLC	18.00%	1026/223	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Dean E. Garrison	TH Exploration, LLC	18.00%	984/539	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Roger L. Garrison and Marilyn L. Garrison	TH Exploration, LLC	18.00%	965/503	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		David Gibson and Rebecca Frazier Gibson	TH Exploration, LLC	18.00%	1037/444	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Jerry L. Goldberg and Donna J. Goldberg	TH Exploration, LLC	18.00%	963/101	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Scott D. Goldman	TH Exploration, LLC	18.00%	1019/477	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Barbara Dobbs Gorbby	TH Exploration, LLC	18.00%	1067/410	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Dillen Henry	TH Exploration, LLC	18.00%	972/91	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Dustin Henry	TH Exploration, LLC	18.00%	972/97	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Kimberly Henry	TH Exploration, LLC	18.00%	972/94	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Trevor Hooks	TH Exploration, LLC	18.00%	970/80	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Patrick T. Howell	TH Exploration, LLC	18.00%	1045/446	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Carey J. Kendall and Hazel M. Kendall	TH Exploration, LLC	18.00%	962/584	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	

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Gladys Briggs 5H
Marshall County, West Virginia

Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		James D. Kimbrel and Portia C. Kimbrel	TH Exploration, LLC	18.00%	965/515	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Gladys Frazier King	TH Exploration, LLC	18.00%	1033/308	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Janice L. Kuhn	TH Exploration, LLC	18.00%	1067/412	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Katharyn Annette Lilly Laing and Freddie Joe Laing	TH Exploration, LLC	18.00%	963/426; Amended at 964/494	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Beverly A. Ledbetter	TH Exploration, LLC	18.00%	965/530	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		William L. Leek	TH Exploration, LLC	16.00%	1026/215	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Elizabeth Haley Leek	TH Exploration, LLC	18.00%	972/100	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Stephen B. Leek and Cynthia S. Leek	TH Exploration, LLC	16.00%	1010/334	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Katharyn Day Lilly, Dower Life Estate; Cecil Harry Lilly, Mary Penelope Lilly Murphy, Katharyn Annette Lilly Laing, Remaindermen	TH Exploration, LLC	18.00%	963/423; Amended at 967/203; 963/148; Amended at 967/205; 984/534	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Charlotte E. Marriner	TH Exploration, LLC	18.00%	960/56	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Brian K. Masters and Melinda D. Masters	TH Exploration, LLC	18.00%	965/501	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Charles B. Masters and Kimberly K. Masters	TH Exploration, LLC	18.00%	983/564	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Steven D. Masters and Monica M. Masters	TH Exploration, LLC	18.00%	983/567	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Benjamin Mather and Rebecca Mather	TH Exploration, LLC	18.00%	983/647	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		James Mather	TH Exploration, LLC	18.00%	1009/116	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Brady J. McCort	TH Exploration, LLC	18.00%	983/645	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		William K. Merritt and Linda J. Merritt	TH Exploration, LLC	18.00%	965/507	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Edwin K. Michel and Kimberly B. Michel	TH Exploration, LLC	18.00%	1020/364	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Gregg Alan Miller and Beth Ann Miller, h/w	TH Exploration, LLC	18.00%	940/236; 955/130 (amended)	

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Tract #	Tax Parcel	Lessor	Lessee	Royalty	Book/Page	Interest Not Leased by Southwestern Production Company, LLC
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Waylon L. Murphree and Angela J. Murphree	TH Exploration, LLC	18.00%	961/520	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Mary Penelope Lilly Murphy	TH Exploration, LLC	18.00%	984/534 Amended at 967/210	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Brenda L. Neuhart	TH Exploration, LLC	18.00%	1028/591	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Betty Lou Noble	TH Exploration, LLC	18.00%	1067/414	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Erica S. Owen and Matthew J. Owen	TH Exploration, LLC	18.00%	1033/121	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Shirley Ann Dobbs, Life Estate; Kathy Dobbs Wells and Darlene Dobbs Owens, Remaindermen	TH Exploration, LLC	18.00%	984/545	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Jana K. Parry and Aaron R. Parry	TH Exploration, LLC	18.00%	962/580	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Rudolph H. Parsons	TH Exploration, LLC	18.00%	965/534	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Charles R. Peters and Sharon Dobbs Peters	TH Exploration, LLC	18.00%	1067/406	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Linda L. Potts and Donald D. Potts	TH Exploration, LLC	18.00%	1028/621	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Kevin W. Randolph and Bonnie J. Randolph	TH Exploration, LLC	18.00%	963/94	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		David Rosario and Julie A. Rosario	TH Exploration, LLC	18.00%	1027/130	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Edward S. Rosenthal and Nancy Ann Goldberg Rosenthal	TH Exploration, LLC	18.00%	961/524	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Robert E. Roush and Sarah M. Roush	TH Exploration, LLC	18.00%	961/528	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Paul Russell and Mary Lou Russell	TH Exploration, LLC	18.00%	962/219	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Patricia A. Rutter	TH Exploration, LLC	18.00%	1023/510	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		David Lee Scott and Margaret Tanise Scott	TH Exploration, LLC	18.00%	963/103	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Lisa L. Sheaks and James C. Sheaks	TH Exploration, LLC	18.00%	1026/226	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	

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Marshall County, West Virginia

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		Barbara H. Simmons	TH Exploration, LLC	16.00%	1024/307	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Ramona K. Springer and Richard D. Springer	TH Exploration, LLC	18.00%	1026/220	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Gari Jo Stackhouse	TH Exploration, LLC	18.00%	1038/508	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Stone Hill Minerals Holdings, LLC	TH Exploration, LLC	15.00%	1063/559	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		James L. Stout	TH Exploration, LLC	18.00%	960/117	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Timothy L. Stout and Dorothy M. Stout	TH Exploration, LLC	18.00%	960/50	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Lucy P. Sullivan	TH Exploration, LLC	18.00%	1012/199	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Bonnie Sue Patterson Swisher	TH Exploration, LLC	16.00%	988/109	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Betty G. Tremelling	TH Exploration, LLC	18.00%	1028/594	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Christopher Van Meter, minor, by Thomas H. Tennant, Special Commissioner	TH Exploration, LLC	19.00%	1020/201	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Justin Van Meter, minor, by Thomas H. Tennant, Special Commissioner	TH Exploration, LLC	19.00%	1020/362	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Lisa R. Warrick and Charles D. Warrick	TH Exploration, LLC	18.00%	965/512	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Thomas Brian Warrick	TH Exploration, LLC	18.00%	960/115	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Paula Banks and Paul Banks	TH Exploration, LLC	18.00%	1008/28	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Shirley Ann Dobbs, Life Estate; Kathy Dobbs Wells and Darlene Dobbs Owens, Remaindermen	TH Exploration, LLC	18.00%	984/545	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Kurt J. Wenneman and Debra A. Wenneman	TH Exploration, LLC	18.00%	977/344	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		William C. West and Debra A. West	TH Exploration, LLC	18.00%	965/532	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Robert E. West	TH Exploration, LLC	18.00%	965/517	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		William A. Western and Vickie D. Western	TH Exploration, LLC	18.00%	960/54	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	

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		Anna M. Wright	TH Exploration, LLC	18.00%	966/186	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Charles G. Wright	TH Exploration, LLC	18.00%	1020/207	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Christopher L. Wright	TH Exploration, LLC	18.00%	966/179	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Dennis Lee Wright and Melinda Ann Wright	TH Exploration, LLC	18.00%	966/181	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Harry R. Wright, Jr.	TH Exploration, LLC	18.00%	966/184	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Christopher A. Kelly and Michelle A. Wright	TH Exploration, LLC	18.00%	1020/205	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Paula Jo Wright	TH Exploration, LLC	18.00%	1020/203	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Ronald A. Wycinski	TH Exploration, LLC	18.00%	974/192	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
14	7-8-2	Regina Danette Figueroa, married	American Petroleum Partners Operating LLC	18.00%	1010/535	0.0000%
		American Petroleum Partners Operating, LLC	TH Exploration, LLC		43/515	
		TH Exploration, LLC	SWN Production Company, L.L.C.		48/400 48/433	
		Danny Shawn Kerns, married	American Petroleum Partners Operating LLC	18.00%	1010/532	
		American Petroleum Partners Operating, LLC	TH Exploration, LLC		43/515	
		TH Exploration, LLC	SWN Production Company, L.L.C.		48/400 48/433	
		Deena Janine Palomo, divorced	American Petroleum Partners Operating LLC	18.00%	1009/357	
		American Petroleum Partners Operating, LLC	TH Exploration, LLC		43/515	
		TH Exploration, LLC	SWN Production Company, L.L.C.		48/400 48/433	
15	9-12-14	Alyce Lynne McGuffie	TH Exploration, LLC	17.00%	964/446	0.0000%
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
		Resource Minerals Headwater I, LP	TH Exploration, LLC	18.00%	940/448	
		TH Exploration, LLC	SWN Production Company, LLC		48/400 48/433	
* At least 7 minerals owners in tract and at least 75% of the royalty owners have consented to the lawful use or development of the oil or natural gas mineral property on the tract. The Interests of the remaining co-tenants will be secured pursuant to the Co-tenancy Modernization and Majority Protection Act.						

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4705102370



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

February 12, 2021

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

RE: SWN's proposed New Well: Gladys Briggs MSH 5H in Marshall County, West Virginia, Drilling under Cameron Ridge Road.

Dear Ms. Adkins:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Cameron Ridge Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Brandi Williams".

Brandi Williams, CPL
Staff Landman
SWN Production Company, LLC

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A handwritten signature in red ink that reads "R/A → V+°".

The Right People doing the Right Things,
wisely investing the cash flow from our
underlying Assets. **04/02/2021**

4705102370

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

Date of Notice Certification: 2/20/21

API No. 47- 051 _____
Operator's Well No. Gladys Briggs MSH 5H _____
Well Pad Name: Gladys Briggs MSH pad _____

Notice has been given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>532,906.878</u>	RECEIVED Office of Oil and Gas
County: <u>051-MARshall</u>		Northing: <u>4,401,989.727</u>	
District: <u>Liberty</u>	Public Road Access: <u>Fish Creek Road</u>		FEB 23 2021
Quadrangle: <u>Cameron</u>	Generally used farm name: <u>Gladys Briggs</u>		
Watershed: <u>Fish Creek</u>			WV Department of Environmental Protection

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 type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE		<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		<input 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 noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

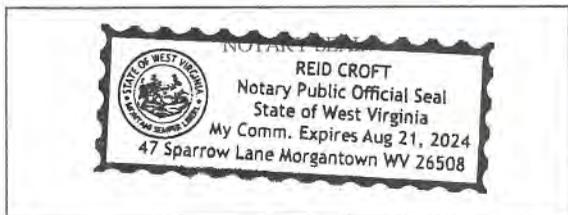
04/02/2021

Certification of Notice is hereby given:

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

Well Operator:	<u>SWN Production Co., LLC</u>	Address:	<u>1300 Fort Pierpont Dr., Suite 201</u>
By:	<u>Brittany Woody</u>		<u>Morgantown, WV 26508</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u>304-884-1690</u>
Telephone:	<u>304-884-1610</u>	Email:	<u>Brittany_Woody@swn.com</u>

Brittany Woody



Subscribed and sworn before me this 22nd day of February, 2021
Reid Croft Notary Public
 My Commission Expires August 21, 2024

Oil and Gas Privacy Notice:

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

RECEIVED
 Office of Oil and Gas
 FEB 23 2021
 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: 2/23 Date Permit Application Filed: 2/23

Notice of:

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

RECEIVED
Office of Oil and Gas

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

FEB 23 2021

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

WV Department of Environmental Protection

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: James Briggs
 Address: 531 Briggs Lane
 Cameron, WV 26033
 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: James Briggs
 Address: 531 Briggs Lane
 Cameron, WV 26033
 COAL OPERATOR
 Name: _____
 Address: _____

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

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

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: Columbia Gas Transmission, LLC Attn: John Shelton
 Address: 1700 MacCorkle Ave SE/PO Box 1273
 Charleston, WV 25325

*Please attach additional forms if necessary

4705102370

ATTACHMENT 13

PARCELID	OWNERNAME	ADDRESS	CITY STATE ZIP	WATER SOURCES
07 16000200000000	BRIGGS GLADYS R	531 BRIGGS LN	CAMERON, WV 26033	2
07 16000500000000	BRIGGS JACK J	307 BRIGGS LN	CAMERON, WV 26033	2

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FEB 23 2021

WV Department of
Environmental Protection

04/02/2021

**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: 2/22 **Date Permit Application Filed:** 2/22

Notice of:

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

RECEIVED
Office of Oil and Gas
FEB 23 2021

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

WV Department of
Environmental Protection

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: Patty Briggs
Address: 342 Briggs Lane
Cameron, WV 26033
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Patty Briggs
Address: 342 Briggs Lane
Cameron, WV 26033

COAL OPERATOR
Name: _____
Address: _____

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

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

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

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

*Please attach additional forms if necessary

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: 2/23/21 Date Permit Application Filed: 2/23/21

Notice of:

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

RECEIVED
Office of Oil and Gas

FEB 23 2021

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

WV Department of
Environmental Protection

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: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033
Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033
 COAL OPERATOR
Name: _____
Address: _____

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

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

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

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
Address: _____

*Please attach additional forms if necessary

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: 2/20 Date Permit Application Filed: 2/20
Notice of:

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Office of Oil and Gas
FEB 23 2021
WV Department of
Environmental Protection

- 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: _____
Address: _____

Name: _____
Address: _____

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

Name: _____
Address: _____

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

COAL OWNER OR LESSEE
Name: ACNR Resources Attn: Mason Smith
Address: 46226 National Road
St. Clairsville, OH 43950

COAL OPERATOR
Name: _____
Address: _____

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

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

*Please attach additional forms if necessary

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: 2/20 Date Permit Application Filed: 2/22
Notice of:

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

RECEIVED
Office of Oil and Gas

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

FEB 23 2021

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

WV Department of
Environmental Protection

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: _____

Address: _____

Name: _____

Address: _____

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

Name: _____

Address: _____

Name: _____

Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: C/O Leatherwood, Inc. Attn: Casey Saunders

Address: 1000 Consol Energy Drive

Canonsburg, PA 15317

COAL OPERATOR

Name: _____

Address: _____

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

Name: _____

Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____

Address: _____

*Please attach additional forms if necessary

FEB 23 2021

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.

WV Department of
Environmental Protection

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

04/02/2021

WW-6A
(8-13)

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Office of Oil and Gas

FEB 23 2021

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API NO. 47-051 -

OPERATOR WELL NO. Gladys Briggs MSH 5H

Well Pad Name: Gladys Briggs MSH pad

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

04/02/2021

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.

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WV Department of
Environmental Protection

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.

WW-6A
(8-13)

API NO. 47-051-4705102370
OPERATOR WELL NO. Gladys Briggs MSH 5H
Well Pad Name: Gladys Briggs MSH pad

Notice is hereby given by:

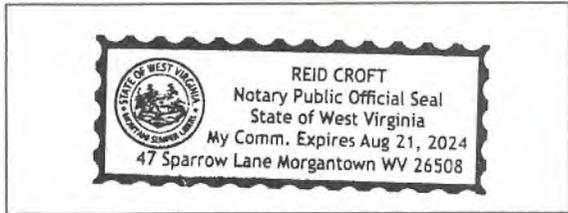
Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

Brittany Woody

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 22nd day of Feb, 2021.

Reid Croft

Notary Public

My Commission Expires August 21, 2024

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WV Department of
Environmental Protection

04/02/2021

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: 1/8/2021 **Date of Planned Entry:** 1/15/2021

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FEB 23 2021

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

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

WV Department of Environmental Protection

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

Notice is hereby provided to:

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

COAL OWNER OR LESSEE
Name: AGNR Resources Attn: Mason Smith
Address: 46228 National Road
St. Clairsville, OH 43950

MINERAL OWNER(s)
Name: _____
Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

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

Approx. Latitude & Longitude: 39.771869, -80.607354
Public Road Access: Fish Ridge Road
Watershed: Fish Creek
Generally used farm name: Gladys Briggs

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: Britlany_Woody@swn.com

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

Oil and Gas Privacy Notice:

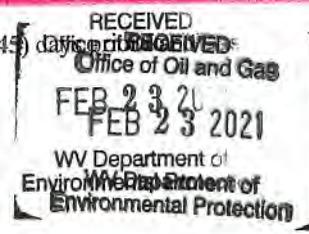
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory 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.

04/02/2021

WW-6A3
(1/12)

**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: 1/8/2021 **Date of Planned Entry:** 1/15/2021



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:

- | | |
|---|--|
| <input checked="" type="checkbox"/> SURFACE OWNER(s)
Name: Patty Briggs
Address: 342 Briggs Lane
Cameron, WV 26033
Name: _____
Address: _____
Name: _____
Address: _____ | <input type="checkbox"/> COAL OWNER OR LESSEE
Name: _____
Address: _____
<input type="checkbox"/> MINERAL OWNER(s)
Name: _____
Address: _____ |
|---|--|

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia	Approx. Latitude & Longitude: 39.771869, -80.607354
County: Marshall	Public Road Access: Fish Ridge Road
District: Liberty	Watershed: Fish Creek
Quadrangle: Cameron	Generally used farm name: Gladys Briggs

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	Address: 1300 Fort Pierpont Dr., Suite 201
Telephone: 304-884-1610	Morgantown, WV 26508
Email: Brittany_Woody@swn.com	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.

04/02/2021

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: 1/8/2021 **Date of Planned Entry:** 1/15/2021

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

FEB 23 2021

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

WV Department of Environmental Protection

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: James Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: James Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

MINERAL OWNER(s)

Name: James Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

*please attach additional forms if necessary

Notice is hereby given:

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

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

Approx. Latitude & Longitude: 39.771869, -80.607354
Public Road Access: Fish Ridge Road
Watershed: Fish Creek
Generally used farm name: Gladys Briggs

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.

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: 1/8/2021 **Date of Planned Entry:** 1/15/2021

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.

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FEB 23 2021

WV Department of
Environmental Protection

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

MINERAL OWNER(s)

Name: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

*please attach additional forms if necessary

Notice is hereby given:

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

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

Approx. Latitude & Longitude: 39.771869, -80.607354
Public Road Access: Fish Ridge Road
Watershed: Fish Creek
Generally used farm name: Gladys Briggs

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

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04/02/2021

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: 1/8/2021 Date of Planned Entry: 1/15/2021

RECEIVED
Office of Oil and Gas

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

FEB 23 2021

PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION
WV Department of Environmental Protection

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

Notice is hereby provided to:

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

COAL OWNER OR LESSEE
Name: C/O Leatherwood Inc. Attn: Casey Saunders
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

MINERAL OWNER(s)
Name: _____
Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia Approx. Latitude & Longitude: 39.771869, -80.607354
County: Marshall Public Road Access: Fish Ridge Road
District: Liberty Watershed: Fish Creek
Quadrangle: Cameron Generally used farm name: Gladys Briggs

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 Address: 1300 Fort Pierpont Dr., Suite 201
Telephone: 304-884-1610 Morgantown, WV 26508
Email: Brittany_Woody@swn.com Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 01/27/2021 **Date Permit Application Filed:** 2/2/21

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Office of Oil and Gas

FEB 23 2021

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

WV Department of
Environmental Protection

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: C/O Leatherwood, Inc.
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: _____
Address: _____

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 532,906.878
County: Marshall Northing: 4,401,989.727
District: Liberty Public Road Access: Fish Ridge Road
Quadrangle: Cameron 7 1/2, WV Generally used farm name: Gladys Briggs MSH
Watershed: Fish Creek (HUC-10)

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: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

Oil and Gas Privacy Notice:

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

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: 01/27/2021 **Date Permit Application Filed:** 2/8/21

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: ACNR Resources
Address: 46226 National Road
St. Clairsville, OH 43950

Name: _____
Address: _____

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 532,906.878
County: Marshall Northing: 4,401,989.727
District: Liberty Public Road Access: Fish Ridge Road
Quadrangle: Cameron 7 1/2', WV Generally used farm name: Gladys Briggs MSH
Watershed: Fish Creek (HUC-10)

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: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

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

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

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

Date of Notice: 01/27/2021

Date Permit Application Filed: 2/20/21

RECEIVED
Office of Oil and Gas

FEB 23 2021

WV Department of
Environmental Protection

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: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

Name: _____
Address: _____

Notice is hereby given:

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

State:	West Virginia	UTM NAD 83	Easting:	532,906.878
County:	Marshall		Northing:	4,401,989.727
District:	Liberty	Public Road Access:		Fish Ridge Road
Quadrangle:	Cameron 7 1/2', WV	Generally used farm name:		Gladys Briggs MSH
Watershed:	Fish Creek (HUC-10)			

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: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

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WW-6A4
(1/12)

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: 01/27/2021

Date Permit Application Filed: 2/2/21

RECEIVED
Office of Oil and Gas

FEB 23 2021

WV Department of
Environmental Protection

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: Patty Briggs

Address: 342 Briggs Lane

Cameron, WV 26033

Name: _____

Address: _____

Notice is hereby given:

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

State: West Virginia

County: Marshall

District: Liberty

Quadrangle: Cameron 7 1/2', WV

Watershed: Fish Creek (HUC-10)

UTM NAD 83

Easting: 532,906.878

Northing: 4,401,989.727

Public Road Access:

Fish Ridge Road

Generally used farm name:

Gladys Briggs MSH

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: 304-884-1675

Email: Justin_Booth@swn.com

Facsimile: _____

Authorized Representative: Justin Booth

Address: 1300 Fort Pierpont Dr., Suite 201

Morgantown, WV 26508

Telephone: 304-884-1675

Email: Justin_Booth@swn.com

Facsimile: _____

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04/02/2021

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: 01/27/2021 Date Permit Application Filed: 2/23

RECEIVED
Office of Oil and Gas
FEB 23 2021
WV Department of
Environmental Protection

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: James Briggs Address: 531 Briggs Lane
Cameron, WV 26033
Name: Address:
Address:

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 532,906.878
County: Marshall Northing: 4,401,989.727
District: Liberty Public Road Access: Fish Ridge Road
Quadrangle: Cameron 7 1/2', WV Generally used farm name: Gladys Briggs MSH
Watershed: Fish Creek (HUC-10)

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

Oil and Gas Privacy Notice:

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WW-6A5
(1/12)

4705102370
Operator Well No. Gladys Briggs MSH 5H

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

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

Date of Notice: 01/27/2021 Date Permit Application Filed: 2/2/21

RECEIVED
Office of Oil and Gas

FEB 23 2021

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

WV Department of
Environmental Protection

CERTIFIED MAIL
RETURN RECEIPT REQUESTED HAND
DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: C/O Leatherwood, Inc. Name: _____
Address: 1000 Consol Energy Drive Address: _____
Canonsburg, PA 15317

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 532,906.878
County: Marshall Northing: 4,401,989.727
District: Liberty Public Road Access: Fish Ridge Road
Quadrangle: Cameron 7 1/2', WV Generally used farm name: Gladys Briggs MSH
Watershed: Fish Creek (HUC-10)

This Notice Shall Include:

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

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

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04/02/2021

WW-6A5
(1/12)

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

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

Date of Notice: 01/27/2021 **Date Permit Application Filed:** 2/1/21

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

RECEIVED
Office of Oil and Gas

FEB 23 2021

WV Department of
Environmental Protection

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

Name: ACNR Resources Name: _____
 Address: 46226 National Road Address: _____
 St. Clairsville, OH 43950

Notice is hereby given:

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

State:	West Virginia	UTM NAD 83	Easting:	532,906.878
County:	Marshall		Northing:	4,401,989.727
District:	Liberty	Public Road Access:	Fish Ridge Road	
Quadrangle:	Cameron 7 1/2', WV	Generally used farm name:	Gladys Briggs MSH	
Watershed:	Fish Creek (HUC-10)			

This Notice Shall Include:

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

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

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WW-6A5
(1/12)

4705102370
Operator Well No. Gladys Briggs MSH 5H

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

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

Date of Notice: 01/27/2021 **Date Permit Application Filed:** 2/2/21

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

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: Roger Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

Name: _____
Address: _____

RECEIVED
Office of Oil and Gas
FEB 23 2021
WV Department of
Environmental Protection

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 532,906.878
County: Marshall Northing: 4,401,989.727
District: Liberty Public Road Access: Fish Ridge Road
Quadrangle: Cameron 7 1/2', WV Generally used farm name: Gladys Briggs MSH
Watershed: Fish Creek (HUC-10)

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-884-1675
Email: Justin_Booth@swn.com

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

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04/02/2021

WW-6A5
(1/12)

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

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

Date of Notice: 01/27/2021 **Date Permit Application Filed:** 2/2/21

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

RECEIVED
Office of Oil and Gas

FEB 23 2021

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

WV Department of
Environmental Protection

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: Patty Briggs Name: _____
Address: 342 Briggs Lane Address: _____
Cameron, WV 26033 _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>532,906.878</u>
County:	<u>Marshall</u>		Northing:	<u>4,401,989.727</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Fish Ridge Road</u>	
Quadrangle:	<u>Cameron 7 1/2', WV</u>	Generally used farm name:	<u>Gladys Briggs MSH</u>	
Watershed:	<u>Fish Creek (HUC-10)</u>			

This Notice Shall Include:

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

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

Oil and Gas Privacy Notice:

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

04/02/2021

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

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

Date of Notice: 01/27/2021 **Date Permit Application Filed:** ajaz

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

RECEIVED
Office of Oil and Gas
FEB 23 2021
WV Department of
Environmental Protection

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: James Briggs
Address: 531 Briggs Lane
Cameron, WV 26033

Name: _____
Address: _____

Notice is hereby given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>532,906.878</u>
County:	<u>Marshall</u>		Northing:	<u>4,401,989.727</u>
District:	<u>Liberty</u>	Public Road Access:	<u>Fish Ridge Road</u>	
Quadrangle:	<u>Cameron 7 1/2', WV</u>	Generally used farm name:	<u>Gladys Briggs MSH</u>	
Watershed:	<u>Fish Creek (HUC-10)</u>			

This Notice Shall Include:

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

Well Operator: SWN Production Company, LLC
Telephone: 304-884-1675
Email: Justin_Booth@swn.com

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

Oil and Gas Privacy Notice:

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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Byrd E. White, III
Secretary of Transportation/
Commissioner of Highways

January 25, 2021

Jimmy Wriston, P. E.
Deputy Secretary/
Deputy Commissioner

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

Subject: DOH Permit for the Gladys Briggs Pad, Marshall County
Gladys Briggs MSH 5H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2012-0489 which has been issued to Southwestern Energy for access to the State Road for a well site located off Marshall County Route 94 SLS.

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

Very Truly Yours,

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

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

04/02/2021

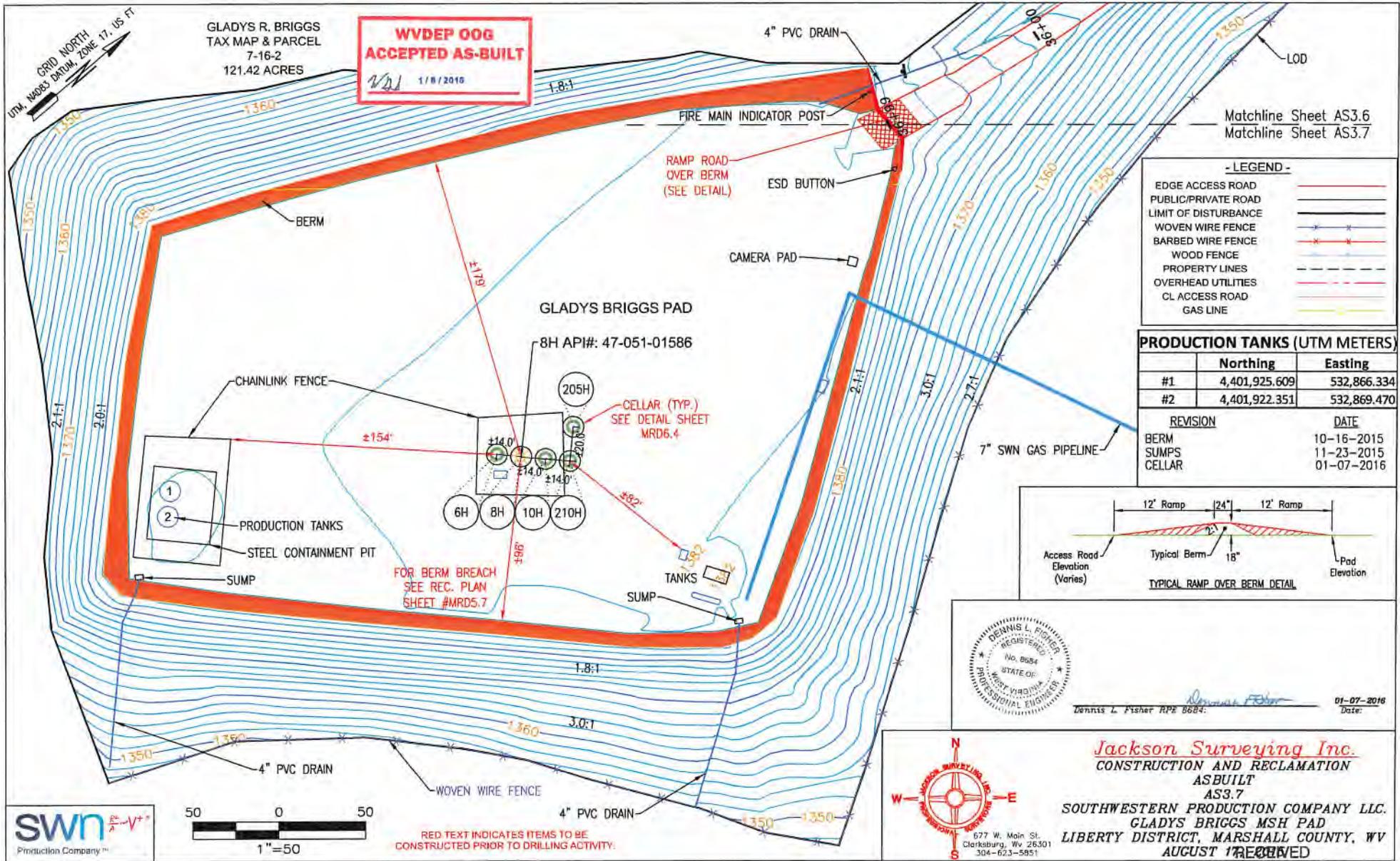
Attachment VI Frac Additives

4705102370

Product Name	Product Use	Chemical Name	CAS Number
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21-1
		Cinnamaldehyde	104-55-2
		Butyl cellosolve	111-76-2
		Formic acid	64-18-6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49-1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
CarboNRT	Tracer	Ceramic Proppant	66402-68-4
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
Ecopol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
		Citric Acid	77-92-9
		Water	7732-18-5
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary
		Hydrotreated light petroleum distillate	64742-47-8
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8
		Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Plexslick 930	Friction Reducer	Copolymer of 2-propenamide	Proprietary
		Hydrotreated Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Alcohols, C12-16, Exoxylated	68551-12-2
		Oleic Acid Diethanolamide	93-83-4
		Ammonium Chloride	12125-02-9
Plexslick 953	Friction Reducer	Petroleum Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Ammonium Chloride	12125-02-9
		N,N-bis (2-hydroxyethyl) oleamide	93-83-4
Plexslick 957	Friction Reducer	Petroleum Distillate	64742-47-8
		Ammonium Chloride	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
		Alcohols, C12-16, Exoxylated	68551-12-2
		Water	7732-15-5
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06-9
Plexaid 655 NM	Scale Inhibitor	Diethylenetriamine penta (methylene phosphonic acid)	15827-30-8
Plexslick 922	no data available	Copolymer of 2-propenamide	69418-26-4
		Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium chloride ((NH4)Cl)	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
Tolcide PS50A	Biocidal product	Tetrakis (hydroxymethyl) phosphonium sulphate	55566-30-8
		Acrylic acid terpolymer containing carboxylate phosphonate and sulfonate groups	397256-50-7
LD-2950	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Ethoxylated alcohol	Proprietary
Legend LD-7750W	Scale Control	Poly (oxy-1,2-ethanediyl) alpha.-tridecyl-omega.-hydroxy, branched	69011-36-5
		Methanol	67-56-1
		Phosphonic Acid Salt	Proprietary
MC MX 8-4743	Specialty Product	Sodium Nitrate	7631-99-4

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FEB 23 2021
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04/02/2021



MAR 29 2021

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