



west virginia department of environmental protection

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

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

Wednesday, September 7, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for ROTH 206H
47-069-00350-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: ROTH 206H
Farm Name: ROTH FARMS, LLC
U.S. WELL NUMBER: 47-069-00350-00-00
Horizontal 6A New Drill
Date Issued: 9/7/2022

Promoting a healthy environment.

09/09/2022

PERMIT CONDITIONS

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

CONDITIONS

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

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 DEFOGNotify@wv.gov.

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 069-Ohio 005-Rich 641-Tiltonsville
Operator ID County District Quadrangle

2) Operator's Well Number: Roth OHI 206H Well Pad Name: Roth OHI

3) Farm Name/Surface Owner: Roth Farms, LLC Public Road Access: Clearview Avenue

4) Elevation, current ground: 1004.0 Elevation, proposed post-construction: 1010'

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

Other

(b) If Gas Shallow x Deep

Horizontal x

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down Dip Well To the South, Target Top TVD- 5744', Target Base TVD- 5800', Anticipated Thickness- 56', Associated Pressure- 3769

8) Proposed Total Vertical Depth: 5789'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 25546'

11) Proposed Horizontal Leg Length: 18481.78

12) Approximate Fresh Water Strata Depths: 452'

13) Method to Determine Fresh Water Depths: Nearby well 47-069-00012

14) Approximate Saltwater Depths: 1119' reported in nearby wells

15) Approximate Coal Seam Depths: 170'

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 X No

(a) If Yes, provide Mine Info: Name: Valley Camp NO 1
Depth: 170 & 811'
Seam: Pittsburgh
Owner: Valley Camp Coal

Signature
SMARSH GOSWAMI
7/28/22

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#	110'	110' ✓	CTS ✓
Fresh Water	13 3/8"	New	J-55	54.4#	505'	505' ✓	527 sx/CTS ✓
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	1706'	1706' ✓	627 sx/CTS ✓
Production	5 1/2"	New	P-110 HP	20#	25546'	25546' ✓	Tail 4598sx/100' Inside Intermediate
Tubing							
Liners							

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

PACKERS

Kind:				
Sizes:				
Depths Set:				

Handwritten signature and notes:
SMAKED WORK
7-28-22

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Environmental Protection
Page 09/09/2022

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

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 24.35

22) Area to be disturbed for well pad only, less access road (acres): 10.46

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

CEMENT ADDITIVES

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

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Southwestern Energy Company			Proposed Drilling Program		
Well:	ROTH OHI 206		Re-entry Rig:	SDC 40	
Field:	PANHANDLE FIELD WET		Prospect:	Marcellus Shale	
County:	OHIO		State:	WV	
SHL:	40.1511 Latitude	-80.6869 Longitude			
BHL:	40.1093 Latitude	-80.6696 Longitude			
KB Elev:	1,030 ft MSL	KB: 26 ft AGL	GL Elev:	1,004 ft MSL	



NO COAL VOID EXPECTED

PROD TOC Lead @ 1,910' MD

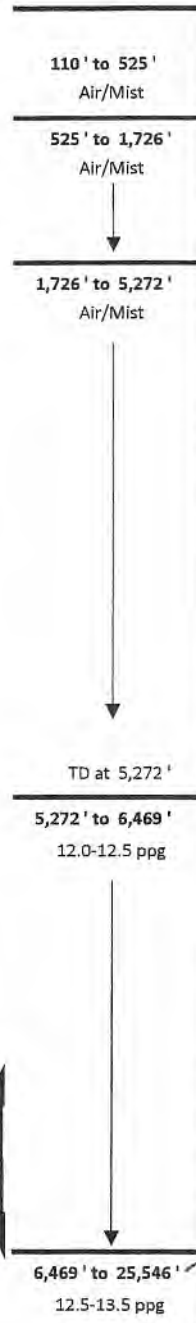
PROD TOC Tail @ 6,293' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	110'
Surface/Coal	13.375	54.4 #	J-55	0'	505'
Intermediate	9.625	36.0 #	J-55	0'	1,706'
Production	5.5	20.0 #	P-110 HP	0'	25,546'

CEMENT DETAIL

	Sacks	Class	Density
Conductor	140	A	19.3
Surface	527	A	15.6
Intermediate	627	A	15.6
Production	4598	A	14.0



KOP at 5,272' MD

Freshwater Depth - 452' TVD
 Coal Void Depth - 170' TVD
 Saltwater Depth - 1,119' TVD
 TVD - 5,789'
 TMD - 25,546'

5,624' Target Center

TD at 25,546' MD
 5,789' TVD

EOB at 6,469' MD

SHL Onondaga 5,635' TVD

Onondaga 5,800' TVD

Created by: Dicky Hall on 07/27/2022

Franklin SWN 7-28-22

WW-9
(4/16)

API Number 47 - 069 - _____
Operator's Well No. Roth OHI 206H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Upper Ohio- Wheeling Quadrangle Tiltonsville

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

Additives to be used in drilling medium? Attachment 3B

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

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

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021 Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013,

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

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

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

Company Official Signature Brittany Woody

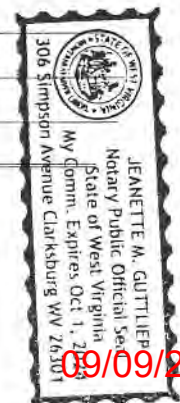
Company Official (Typed Name) Brittany Woody

Company Official Title Senior Regulatory Analyst

Subscribed and sworn before me this 28 day of July, 2022

Jeanette M. Guttler Notary Public

My commission expires 10/01/2024



09/09/2022

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.

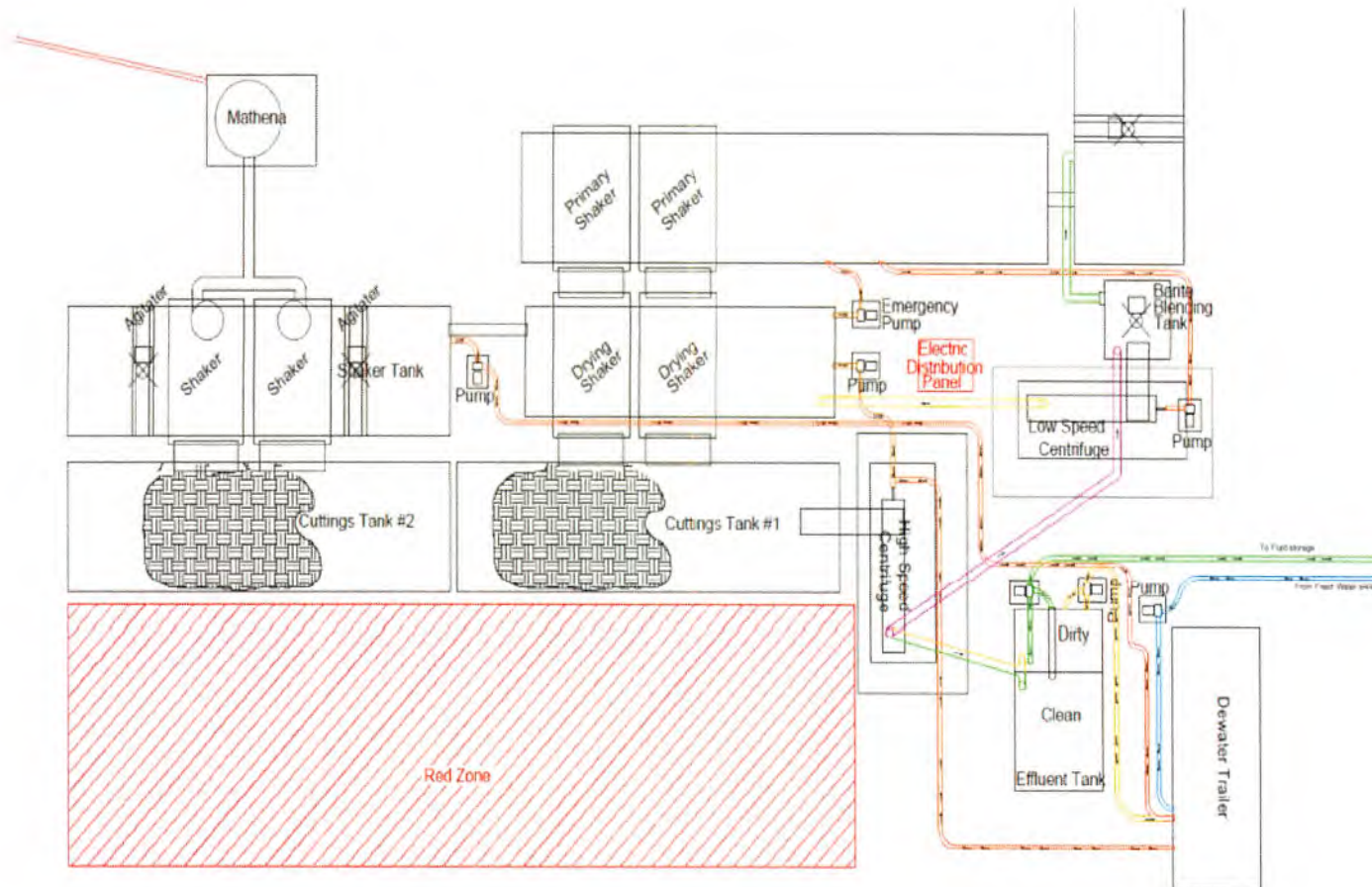
LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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



4706900350

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

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 24.35 Prevegetation pH

Lime as determined by pH test min.2 Tons/acre or to correct to pH 10.46

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

Strader Gower 7-28-22



WVD Seeding Specification

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

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

NON-ORGANIC PROPERTIES

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

SOIL AMENDMENTS

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

Seeding Calculation Information:

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

Synopsis:

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

Special Considerations:

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

ORGANIC PROPERTIES

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

WETLANDS (delineated as jurisdictional wetlands)

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

July 18, 2022

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

RE: Proposed New Well: Roth OHI 206H

Dear Mr. Brewer

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

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

Thank you.

Sincerely,

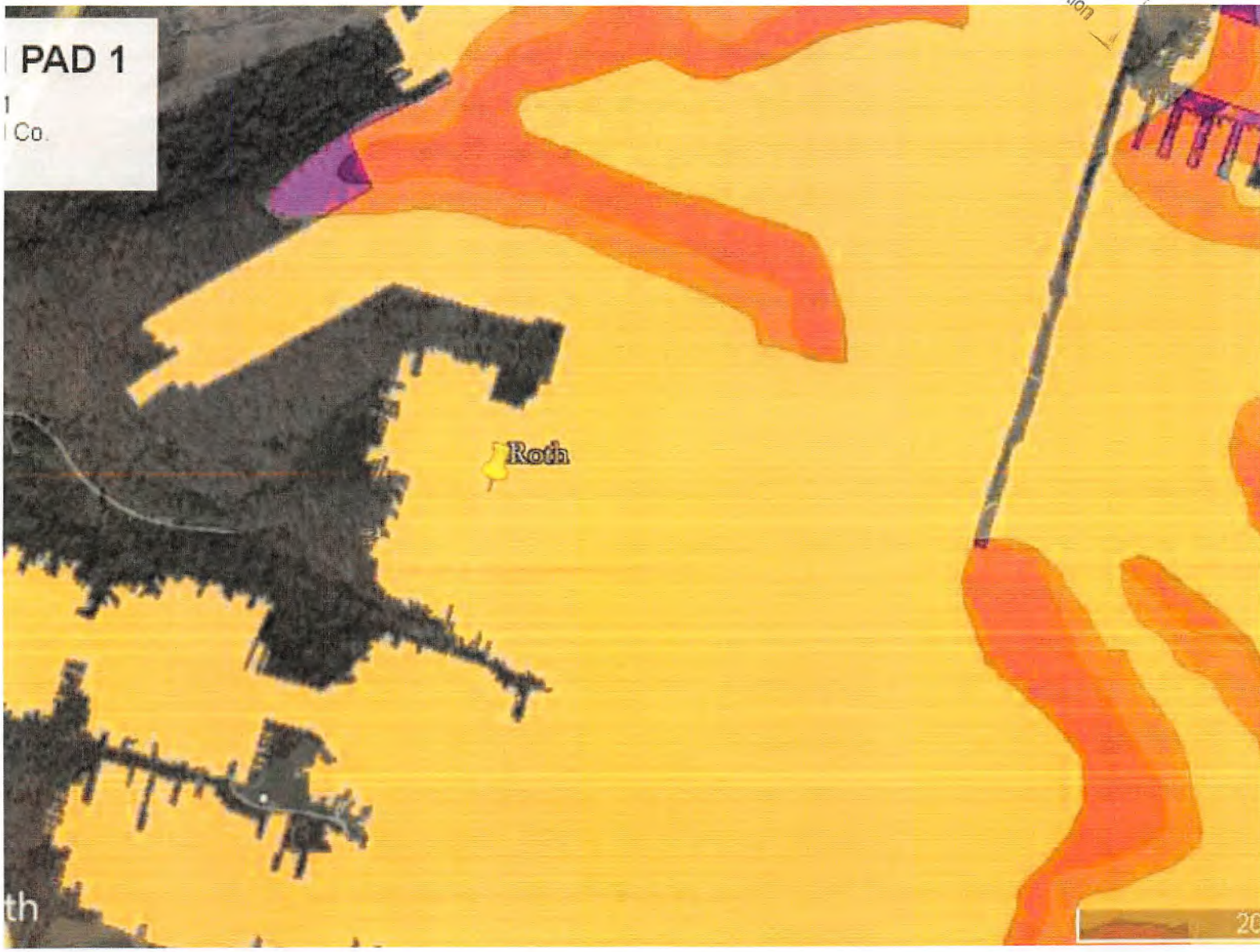


Brittany Woody
Senior Regulatory Analyst
Southwestern Energy Production Company, LLC



4706900350

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MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

RECEIVED
Office of Oil and Gas

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WV Department of
Environmental Protection

**API NO. 47-XXX-XXXXX
WELL NAME: Roth OHI 206H
Tiltonsville QUAD
Richland DISTRICT
Ohio COUNTY, WEST VIRGINIA**

Submitted by:

Name: Brittany Woody

Date: 7/18/2022

Brittany Woody

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: *John Crane*

Date: 7/28/22

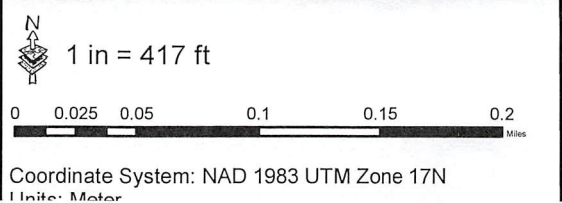
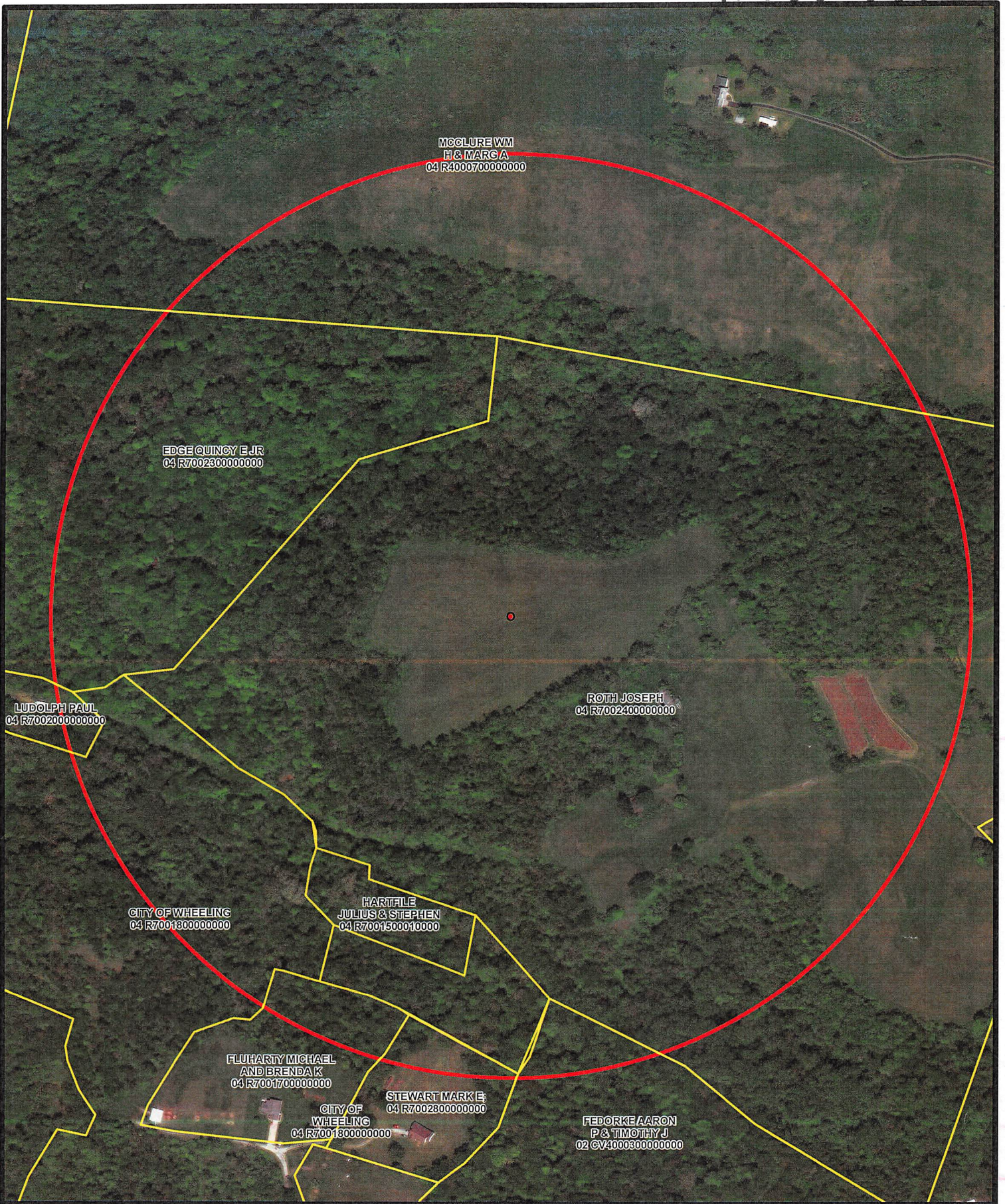
Title: *Oil & Gas Inspector*

Approved by:

Name: _____

Date: _____

Title: _____



Water Purveyor Map
Well Pad: Roth
County: OH

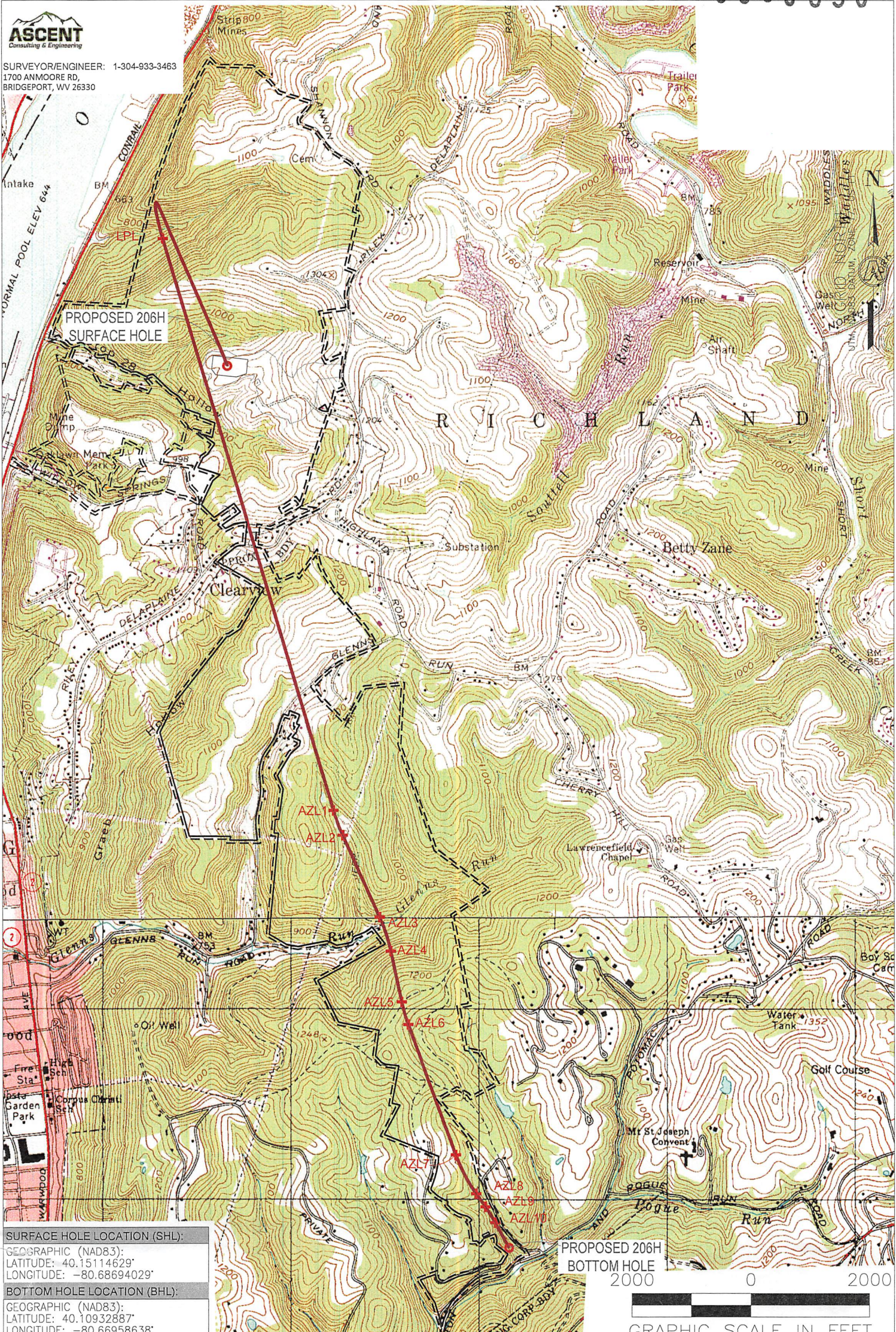
SWN ^{PL} ^{VT} [®]
Southwestern Energy®

09/09/2022

Date: 2/28/2022 | Author: willish



SURVEYOR/ENGINEER: 1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330



PROPOSED 206H
SURFACE HOLE

PROPOSED 206H
BOTTOM HOLE

SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.15114629°
LONGITUDE: -80.68694029°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.10932887°
LONGITUDE: -80.66958638°



09/09/2022

NOTES ON SURVEY

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

LEGEND:

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

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: ROTH OHI	WELL # 206H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	COUNTY - CODE OHIO - 35	DISTRICT; RICHLAND	
SURFACE OWNER: ROTH FARMS, LLC	USGS 7 1/2 QUADRANGLE MAP NAME TILTONSVILLE		



SURVEYOR/ENGINEER: 1-304-933-3463
1700 ANMOORE RD,
BRIDGEPORT, WV 26330

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,444,580.169
EASTING: 526,663.693

LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,445,249.157
EASTING: 526,322.588

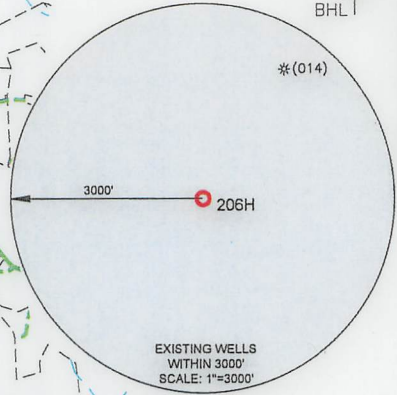
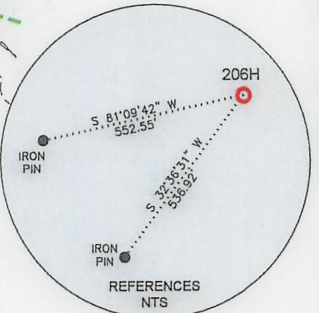
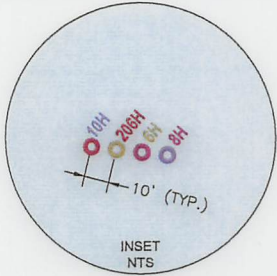
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,944.078
EASTING: 528,159.002

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

LATITUDE: 40°10'00" SURFACE HOLE 5,666'

LATITUDE: 40°07'30" BOTTOM HOLE 816'

BOTTOM HOLE 5,708'
SURFACE HOLE 5,653'
LONGITUDE: 80°40'00"
LONGITUDE: 80°40'00"



LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 87°51'20" E	1716.71'	SHL TO MONUMENT	5/8" IRON REBAR
L2	S 70°37'17" W	1787.59'	SHL TO MONUMENT	1" IRON PIPE

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 27°00'58" W	2,463.68'	3,724.02'	SHL TO LPL
L4	S 16°45'22" E	10,295.54'	10,295.54'	LPL TO AZL1
L5	S 20°37'40" E	459.45'	459.84'	AZL1 TO AZL2
L6	S 24°30'00" E	1,549.33'	1,549.33'	AZL2 TO AZL3
L7	S 18°19'03" E	616.71'	617.84'	AZL3 TO AZL4
L8	S 12°08'10" E	898.61'	898.61'	AZL4 TO AZL5
L9	S 16°11'15" E	404.62'	405.00'	AZL5 TO AZL6
L10	S 20°14'21" E	2,398.96'	2,398.96'	AZL6 TO AZL7
L11	S 27°49'12" E	755.55'	757.87'	AZL7 TO AZL8
L12	S 35°24'03" E	279.15'	279.16'	AZL8 TO AZL9
L13	S 32°12'02" E	319.75'	319.84'	AZL9 TO AZL10
L14	S 29°00'00" E	499.78'	499.79'	AZL10 TO BHL

2500 0 2500

GRAPHIC SCALE IN FEET

WELL RESTRICTIONS

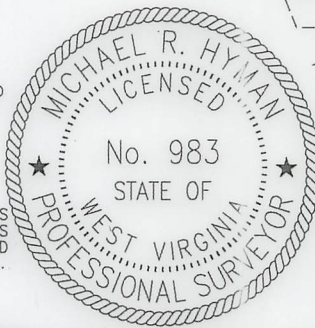
1. NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
3. NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
4. PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS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

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE WV NORTH ZONE NAD '83.
2. WELL LAT./LONG ESTABLISHED BY DIRECT GPS NAD '83.
3. BOUNDARIES SHOWN ARE TAKEN FROM TAX MAPS, DEEDS, AND FIELD SURVEY. THIS DRAWING IS NOT REPRESENTATIVE OF A FULL BOUNDARY SURVEY.
4. SURFACE OWNER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF OHIO COUNTY IN OCTOBER OF 2021.
5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

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 STATE OF WEST VIRGINIA.

P.S. 983



COMPANY:



UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

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

ROTH
OPERATOR'S WELL #: 206H
API WELL #: 47 69 00350
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO-WHEELING ELEVATION: 1004.0'

DISTRICT: RICHLAND COUNTY: OHIO QUADRANGLE: TILTONVILLE 7.5', OH

SURFACE OWNER: ROTH FARMS, LLC ACREAGE: ±118.93

OIL & GAS ROYALTY OWNER: ROTH FARMS, LLC ACREAGE: ±118.93

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

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) **09/09/2022**

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,789 TVD 25,546 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

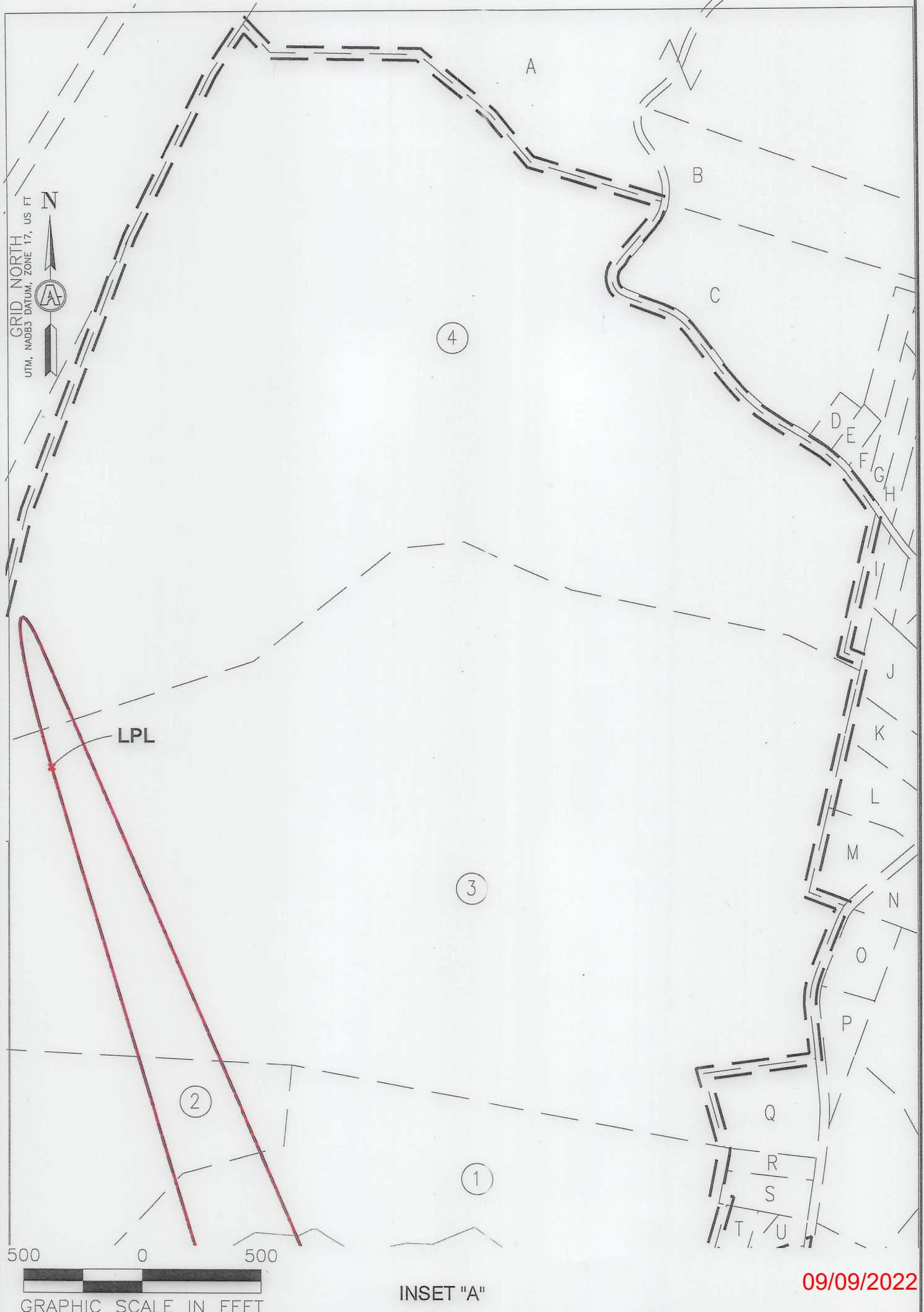
LEGEND:

REVISIONS:

	DATE: 07-28-2022
	FILE NO:
	DRAWN BY: TMF
	SCALE: 1" = 2500'
	DRAWING NO: 2598
	WELL LOCATION PLAT





SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330



09/09/2022

INSET "A"

REVISIONS:

COMPANY:		 	
OPERATOR'S		ROTH	
WELL #:		47-069-00350 206H	
DISTRICT:	COUNTY:	STATE:	DATE:
RICHLAND	OHIO	WV	07/28/2020
DRAWN BY: TMF		SCALE: 1"=500'	
DRAWING NO: ACE-2598		WELL LOCATION PLAT	



**PROPOSED 206H
SURFACE HOLE**

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



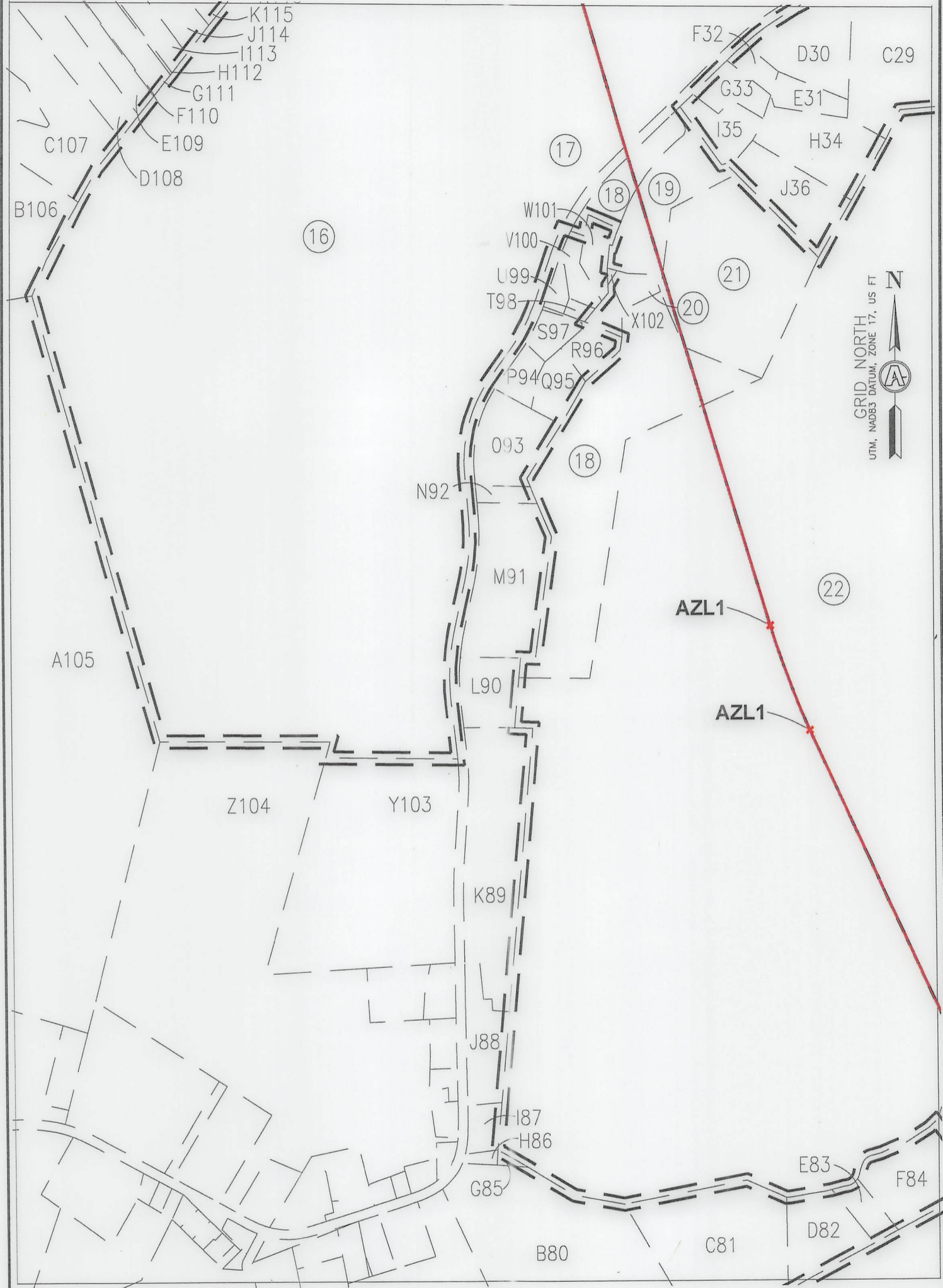
INSET "B"

09/09/2022

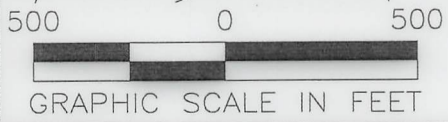
REVISIONS:	COMPANY:			
	OPERATOR'S	ROTH	DATE: 07/28/2020	
	WELL #:	47-061-00350 206H	DRAWN BY: TMF	
	DISTRICT:	RICHLAND	SCALE:	1"=500'
	COUNTY:	OHIO	DRAWING NO:	ACE-2598
	STATE:	WV	WELL LOCATION PLAT	



SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330



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



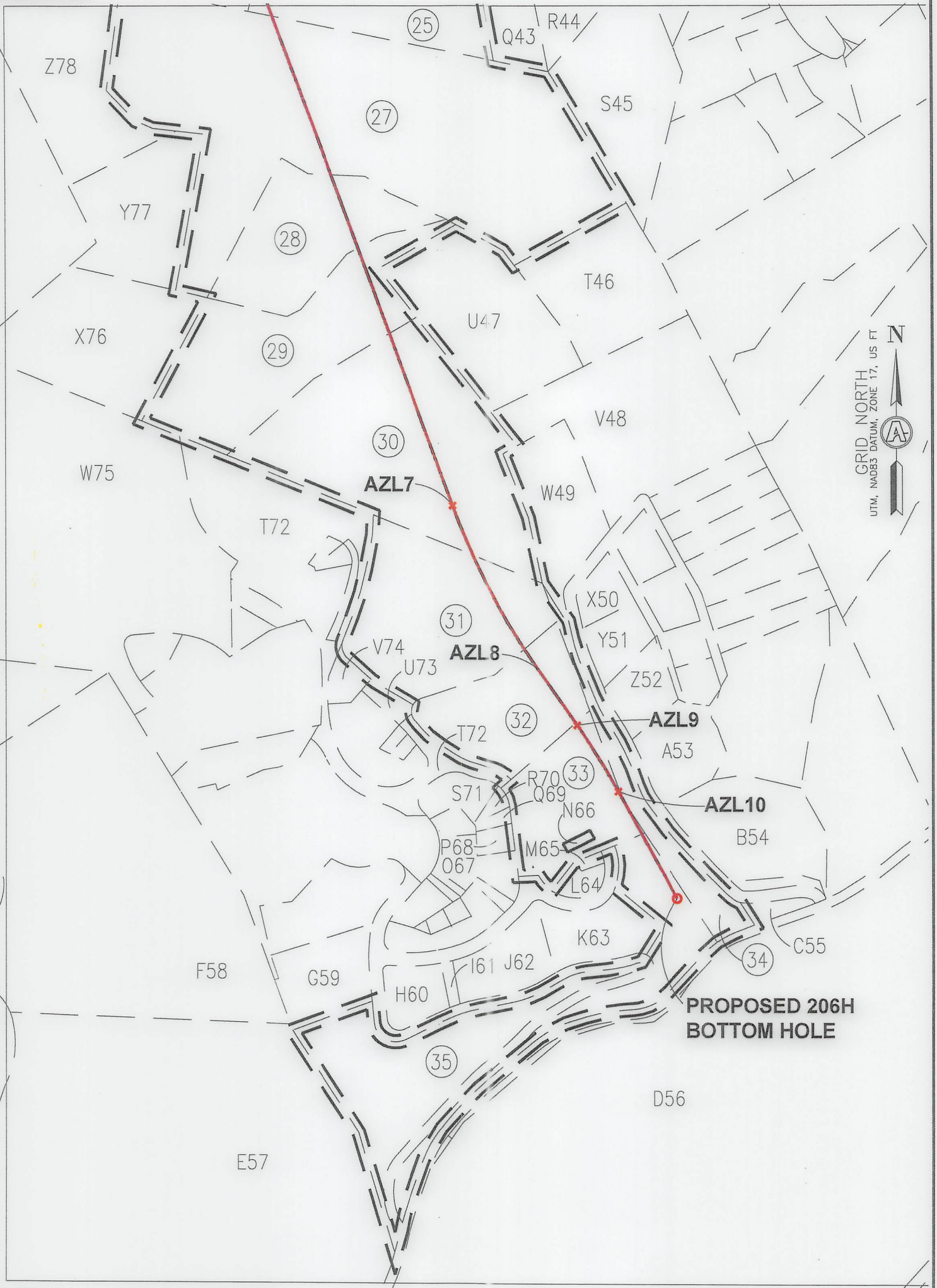
INSET "C"

09/09/2022

REVISIONS:		COMPANY:			
		OPERATOR'S		DATE: 07/28/2020	
		WELL #:		DRAWN BY: TMF	
		DISTRICT:		SCALE: 1"=500'	
		COUNTY:		DRAWING NO: ACE-2598	
		STATE:		WELL LOCATION PLAT	
		RICHLAND			
		OHIO			
		WV			



SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330



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

500 0 500



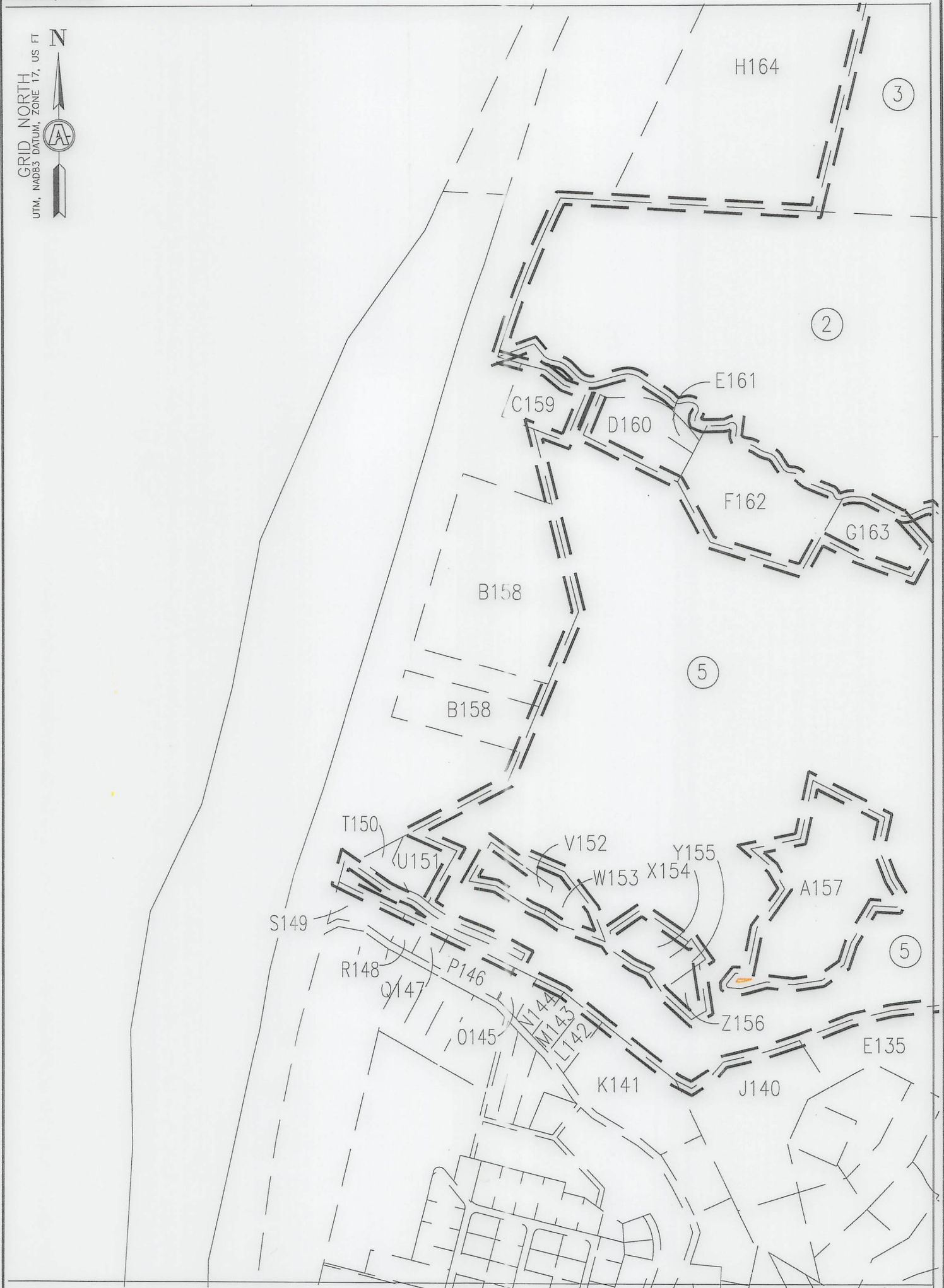
INSET "D"

09/09/2022

REVISIONS:	COMPANY:		
	OPERATOR'S	ROTH	DATE: 07/28/2020
	WELL #:	47-061-00350 206H	DRAWN BY: TMF
	DISTRICT:	RICHLAND	SCALE: 1"=500'
	CO JNTY:	OHIO	DRAWING NO: ACE-2598
	STATE:	WV	WELL LOCATION PLAT



SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330



500 0 500



GRAPHIC SCALE IN FEET

INSET "E"

09/09/2022

REVISIONS:	COMPANY:		
	OPERATOR'S		
	WELL #:		DRAWN BY: TMF
	DISTRICT:	COUNTY:	STATE:
RICHLAND	OHIO	WV	SCALE: 1"=500'
			DRAWING NO: ACE-2598
			WELL LOCATION PLAT



SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S)/ROYALTY OWNER (R)	TAX PARCEL
1	ROTH FARMS, LLC (S)/ROTH FARMS, LLC (R)	4-R7-24
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	EDGE ALICE MAE - TOD	4-R7-23
3	MCCLURE WM H & MARG A	4-R4-07
4	HEART 2 HEART VOLUNTEERS INC	4-R4-05
5	CITY OF WHEELING	4-R7-18
6	STEWART MARK E; GEIGER LEEANN	4-R7-28
7	FEDORKE AARON P & TIMOTHY J	2-CV4-3
8	FEDORKE TIMOTHY JOSEPH	4-R7-37
9	DELANEY EXIE II	4-R7-27.1
10	CUPP KENNETH J	2-CV3-7.1
11	CUPP KENNETH J	2-CV3-8
12	HALESKI PHILIP J & S K	2-CV3-9
13	KLEIN JACK W JR & B J	2-CV4-22.1
14	MYERS WILBERT E III & J S	2-CV3-13
15	HINKLE RANDELL L & D	2-CV3-12
16	WARWOOD LAND CO LLC	4-R7-31
17	STATE OF WV, DEPARTMENT OF TRANSPORTATION	Cherry Hill Road
18	JOHNSON JOHN LLOYD	4-R7-39
19	JOHNSON JOHN	4-R10-29
20	BEABOUT EARLT JR & LL	4-R10-23
21	MCLAUGHLIN HENRY J III	4-R10-29.1
22	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R10-31
23	MARY ANN HESS REALTY LLC	4-R11-5
24	GOLDEN CHRISTOPHER SCOTT GOLDEN BRANDACE LYNN	4-R11-2.4
25	GOLDEN CHRISTOPHER SCOTT BRANDACE LYNN	4-R11-2.13
26	DEFELICE LESLIE PAUL	4-R11-2.7
27	DOYLE DANIEL T	4-R11-2.2
28	WELDER PAUL J & ALYSSA LEE	4-R11-2.10
29	CUSACK JOHN L & TAMMIE L	4-R11-2.9
30	MULL ELLEN CLARICE ET AL	4-R11-1
31	WOLFE AARON T & MICHELLE R	4-R14A-53.6
32	HEARNE WILLIAM H III & C N	4-R14A-53.4
33	KENNEN ROBERT D & DELILAH L	4-R14A-53.7
34	SCHMITT JAMES A	4-R14-4.6
35	JOSEPH ELIAS E	4-R14A-53

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
A	PLUMBY SARA, JULIE KLEIN & JUDITH PATTI	4-R5-22
B	ESTEP JOHN L	4-R5-22.4
C	BUCK THOMAS E & TERRI D	4-R5-23
D	BEEVER MICHAEL E & P A	4-R5-23.3
E	HASELEU ELAINE	4-R5-23.1
F	HASELEU ELAINE M	4-R5-25
G	RICHARDSON DANIEL	4-R5-26.2
H	RICHARDSON BRIAN D AND FLANEGAN CASEY K	4-R5-26.1
I	BOYD ROBERT JEFFREY & CHERYL L	4-R5-24
J	OLEJASZ JOSEPH R JR	4-R5-34
K	OLEJASZ JOSEPH R JR	4-R5-35
L	KUCERA CARL J & SHARON L	4-R5-35.2
M	PAVELICH-SWIGER SHERRI J PAVELICH JEFFREY M	4-R5-35.1
N	WEIGAND PAUL & REBECCA FAMILY TRUST	4-R5-40.1
O	SCHELL RICHARD A & N	4-R8-1.1
P	HABERFIELD WAYNE K & D A	4-R8-1
Q	MCCLURE WM H & MARGARET A	4-R7-26.1
R	LEFKAY SCOTT A & TRACY L	4-R8-2.3
S	FELDNER CHARLENE M - TOD	4-R8-2.1
T	CALDWELL SHANE J & CALDWELL SUZANNE M	4-R7-24.1
U	OLEJASZ JR JOSEPH R OLEJASZ J R SR & G (RT-OCC)	4-R8-2.2
V	MCKEE JAMES F JR & EILEEN B	4-R8-77
W	TUNNEL RIDGE LLC	4-R8-4.18
X	KUCERA LISA A	4-4.8
Y	HELDEFFER GEORGE W	4-4.7
Z	CAMPBELL ALLEN B	4-R8-4.9
A1	CALDWELL SHANE AND SUZANNE	4-R8-78
B2	CLARK JOHN M & B C	4-R8-4.1
C3	CLEGG R E & J L	2-CV1-5
D4	TOMAC ROBERT C JR	2-CV1-4
E5	ROGERSON BENTON L SR & K S	2-CV1-2
F6	SHEARER PHILLIP G & CINDY M	2-CV1-1
G7	QUINN JOHN THOMAS	2-CV4-7
H8	QUINN THOMAS F & SUE ANN TAYLOR	2-CV4-7.4
I9	BENNER SUZANNE J & JAMES T BENNER	2-CV4-7.5
J10	FEDORKE AARON P & FEDORKE RACHEL SUE	2-CV4-4.1
K11	FEDORKE AARON P & RACHEL SUE	4-R7-27.3
L12	MAMULA VALERIE & GEORGE - TOD	2-CV4-4
M13	TURNER TERRY L	2-CV4-18
N14	BONNER ANTHONY S & WRIGHT AMBER R	2-CV4-18.2
O15	BONNER ANTHONY S & AMBER R WRIGHT	2-CV4-18.1
P16	SCAMMELL DAVID & SUSAN	2-CV4-19
Q17	WILLEY JILL A	2-CV4-20
R18	PAVLIK NICHOLAS D AND GLORIA K	2-CV4-21.2
S19	CUPP DAVID J	2-CV4-2
T20	STAHNKE DAVID A & TRICIA J	2-CV4-1
U21	STAHNKE DAVID A AND LITTEN T J	2-CV4-1.1
V22	KOZUSNIK AIMEE N; WHITE LUTHER R	2-CV3-11
W23	DELANEY EXIE II	2-CV3-10
X24	MURRAY BRYAN M AND JOAN C	2-CV4-22
Y25	HESTIA LLC	4-R8-65.1
Z26	GLENN VIEW LIMITED PARTNERSHIP	4-R8-65.4
A27	GLENN VIEW II LIMITED PARTNERSHIP	4-R8-68
B28	MEREDITH DONALD R II AND JULIE	4-R8-69.1
C29	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R8-70
D30	NONI LLC	4-R7-34
E31	NONI LLC	4-R7-34.1
F32	JOHNSON MILDRED J	4-R7-33
G33	JOHNSON MILDRED J	4-R7-32
H34	FUGATE LOGAN DANIEL	4-R7-35
I35	JOHNSON MILDRED JOANN	4-R7-36
J36	JOHNSON STEVEN L & D T	4-R7-36
K37	MEREDITH DONALD R II AND J K	4-R8-69.3
L38	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R8-52
M39	MARY ANN HESS REALTY LLC C/O HANNIG & ASSOCIATES PLLC	4-R11-11
N40	PENN HOLDING LIMITED LIABILITY COMPANY	4-R11-6.3
O41	KURTZ PENN L & JEAN S	4-R11-6.14
P42	TIU JEREMY J & MELISSA J	4-R11-6.18
Q43	GEBHARDT ROBERT TODD GEBHARDT CANDACE ANN	4-R11-2.1
R44	GEBHARDT ROBERT T & CANDACE A	4-R11-6.16
S45	BLOCH STUART STEPHENSON & KATHY J BLOCH	4-R11-6.17
T46	MANNING JACOB A & ADRIANNE L	4-R11-2.8
U47	DOYLE MATTHEW M & CHRISTINE M	4-R11-2.5
V48	HAND SCOTT A & CORRIE J	4-R11-2
W49	CHILDERS WILLIAM A & JENNIFER LYNN	4-R14-4.7
X50	GROUND'S ANGELA JO	4-R14-1
Y51	GARRETT JOHN T & JENNET COOLEY GARRETT	4-R14-1.2
Z52	GARRETT JOHN TRAVIS & JENNET COOLEY	4-R14-1.1

09/09/2022

REVISIONS:	COMPANY:			
	OPERATOR'S		ROTH	
	WELL #:		206H	
	DISTRICT:	COUNTY:	STATE:	DATE: 07/28/2020
	RICHLAND	OHIO	WV	DRAWN BY: TMF
				SCALE: N/A
				DRAWING NO: ACE-2598
				WELL LOCATION PLAT



SURVEYOR/ENGINEER: 1-304-933-3463
 1700 ANMOORE RD,
 BRIDGEPORT, WV 26330

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
A53	GARRETT JOHN T	4-R14-5.1
B54	MELIA JOSEPH M & J M	4-R14-6.1
C55	SCHMITT JAMES A	4-R14-4.5
D56	CITY OF WHEELING	4-R14-15
E57	POLACK EDWARD P	4-R14-95
F58	HUPP SARA	4-R13-14
G59	STRAUB RANDALL E ET AL	4-R14E-1
H60	JOSEPH ELIAS EDW	4-R14E-5
I61	JOSEPH ELIAS	4-R14E-6
J62	ASHMORE PAUL B & MELISA L	4-R14E-6
K63	HODGE JEREMY J & MARGIE M	4-R14E-8
L64	HODGE JEREMY & MARGIE	4-R14A-53.3
M65	HODGE JEREMY & MARGIE	4-R14A-199
N66	FERGUSON SANDRA N	4-R14A-197
O67	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-186
P68	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-171
Q69	FAMILY 9/7/11 IRREVOCABLE TRUST	4-R14A-170
R70	HEARNE WILLIAM H III & C N	4-R14A-169
S71	HEARNE WILLIAM H III & C N	4-R14A-163
T72	COX C NOLAN & DEBORAH A	4-R14A-25
U73	PETRI JOSEPH L JR	4-R14A-53.8
V74	CONSTANTIN THOMAS E & ELIZABETH K	4-R14A-53.5
W75	SANTORINE LORA KAY SANTORINE ADOLPH W JR	4-R14A-24
X76	LOWE JEREMY J & AMANDA L	4-R11-2.6
Y77	LOWE JEREMY J & AMANDA L	4-R11-2.11
Z78	DOYLE DANIEL T & LUCINDA E	4-R11-2.12
A79	MULL ELLEN CLARICE ET AL	4-R10-44.1
B80	NORTH FORK LANDFILL INC C/O SUSAN SARKIS	4-R10-41
C81	MURRAY SANDRA	4-R10-41
D82	MCCARDLE STANLEY JR & MARYANN	4-R11-3
E83	WITSBERGER MARGUERITE L	4-R11-4.1
F84	WITSBERGER AMY L	4-R11-4
G85	NORTH FORK LANDFILL INC C/O SARKIS SUSAN	4-R10-41.1
H86	NORTH FORK LANDFILL INC C/O SUSAN SARKIS	4-R10-39.1
I87	IAFRATE DAVID A	4-R10-39
J88	MCCARDLE STANLEY M JR & M	4-R10-36
K89	MCCARDLE STANLEY M JR & M	4-R10-35
L90	INTERSTATE DEV CORP C/O JACK FELTON CPA	4-R10-46
M91	WEST SHARON L	4-R10-28
N92	BROOKS WILLIAM S C/O WESBANCO TRUST	4-R10-27.1
O93	ERNEST RICHARD H JR & A L	4-R10-27
P94	WILSON CINDY L P & D L	4-R10-26
Q95	MCCRACKEN ROBERT W	4-R10-25
R96	BROST JR CLARENCE W	4-R10-24
S97	BROST RICHARD	4-R10-24.1
T98	BROST JR CLARENCE W	4-R10-22.2
U99	NEWLAND DARRELL L	4-R10-22.3
V100	KYLE CHAD J & E A	4-R10-22
W101	BURTRAND GARY E & T L	4-R10-22.1
X102	BURTRAND GARY E & T L	4-R10-23.1
Y103	BREIDING JOSHUA D & SARAH N	4-R10-20
Z104	SARKIS SJ; ROHRIG RF; ROHRIG JR; ROHRIG RF TTEE	4-R10-19
A105	NORTH FORK LANDFILL INC	4-R10-43
B106	MCGLAUGHLIN DENNIS & S	4-R7-30
C107	CLEARVIEW VOL FIRE DEPT INC	2-CV6-34.1
D108	STEWART CAROL	2-CV6-28
E109	BOPP VICTOR V III & DIANN	2-CV6-28.3
F110	JOSEPH BRADLEY R & JANETTE L	2-CV6-27.1
G111	JOSEPH BRADLEY R & JANETTE L	2-CV6-27
H112	JOSEPH BRADLEY R & JANETTE L	2-CV6-27.2
I113	LAING MARGARET T	2-CV6-26
J114	KIRKSEY MARK R WEATHERSON NANCY (RES'V L/E)	2-CV6-25
K115	CONTRAGUERRO MICHAEL J & P A	2-CV6-24
L116	STEWART GREGORY L & JODI A	2-CV6-23
M117	GALIK JACOB A	2-CV6-22
N118	DAGRAVA TIMOTHY & MEGAN	2-CV6-21
O119	HLAD DOUGLAS M & LISA ANN	2-CV6-20
P120	STEWART LOGAN G	2-CV6-19
Q121	SZALAY FRANCIS E & PL	2-CV3-13.1
R122	CARPENTER RILEY LYNN & MICHAEL DUANE CARPENTER	2-CV3-13.2
S123	PRINCE DENZEL H JR	2-CV3-14.1
T124	ADKINS HOWARD R & E L	2-CV3-5
U125	BELLVILLE ELIZABETH P	2-CV3-4.4
V126	KEEFER JOHN W	2-CV3-4.3
W127	MYERS THOM C & LINDA J	2-CV3-4.5
X128	MAMULA GEO W & V L - TOD	2-CV3-4.6
Y129	STOEHR RONALD J & M G	2-CV3-4
Z130	STOEHR RONALD J & M G	2-CV3-4.7

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S)	TAX PARCEL
A131	SCHUETZ RAYMOND J	2-CV3-6
B132	BIEGA FRANK & CONNIE	4-R7-27.2
C133	ROWND DENISE A ROWND DANIEL THOMPSON III	4-R7-14.1
D134	ROWND DENISE & DANIEL T III	4-R7-14
E135	ROWND DENISE & THOMPSON DANIEL, III	4-R7-12
F136	BIEGA FRANKIE P & C S	4-R7-15
G137	STEWART MARK E	4-R7-15.2
H138	FLUHARTY MICHAEL AND BRENDA K	4-R7-17
I139	HARTFILE GARY- TOD	4-R7-15.1
J140	BIEGA CONNIE SUE & FRANK PAUL	4-R7-12.10
K141	CITY OF WHEELING	4-R7L-105
L142	CITY OF WHEELING	4-R7L-100
M143	MACFARLAND DARIN P & K L	4-R7L-99
N144	CITY OF WHEELING	4-R7G-25
O145	MACFARLAND DARIN P & KIMBERLY	4-R7G-24
P146	COMER JAMES A & J A	4-R7G-23
Q147	COMER JAMES A & J A	4-R7G-20
R148	ROBINSON RICHARD J	4-R7G-19
S149	VELEGOL DAVID & CAROLYN	4-R7G-18
T150	GUZZI COREY A & BRITTANY N	4-R7-10
U151	GUZZI COREY A & BRITTANY N	4-R7-11
V152	FLUHARTY MICHAEL L	4-R7-6
W153	WOLFE JAMES R ESTATE	4-R7-7
X154	FLUHARTY MICHAEL L & BRENDA K	4-R7-8
Y155	FLUHARTY MICHAEL L & BRENDA K	4-R7-9.1
Z156	FLUHARTY MICHAEL & BRENDA	4-R7-9.1
A157	OAKLAND MEMORIAL CEMETERY	4-R7-18.1
B158	ZOECKLER C W R R & C L	4-R7-56
C159	JONES SHANNON M WILDS	4-R7-16.1
D160	DEAN LOMAN L & R Z	4-R7-21
E161	LOEW J W JR & ELSIE	4-R7-22
F162	HARTFILE GARY- TOD	4-R7-16
G163	HARTFILE GARY L- TOD	4-R7-20
H164	DONOHEW WILLIAM SCOTT & LAURA	4-R4-2.4
I165	SCHUETZ RAYMOND J & B A	2-CV3-7

09/09/2022

REVISIONS:	COMPANY:			
	OPERATOR'S		ROTH	
	WELL #:		47-069-00350	
	DISTRICT:		RICHLAND	
	COUNTY:		OHIO	
	STATE:		WV	
	DATE:		07/28/2020	
	DRAWN BY:		TMF	
	SCALE:		N/A	
	DRAWING NO:		ACE-2598	
	WELL LOCATION PLAT			

WW-6A1
(5/13)

Operator's Well No. ROTH OHI 206H

**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				

**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 Co., LLC
 By: Gavin Nadeau, RPL
 Its: Landman

EXHIBIT "A"						
Roth OHI 206H						
Ohio County, West Virginia						
Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WV-6A1, by SWN Production Company, LLC, Operator						
#	TMP	LESSOR	LESSEE	ROYALTY	BE/FC	% INTEREST NOT LEASED BY SWN PRODUCTION COMPANY, LLC
1)	04-00R7-0024-0000	The Trust Agreement of Joseph Roth, dated November 05, 2004	SWN Production Company, LLC	18.00%	931/199	
<i>Note: Joseph A. Roth and Margaret A. Gorgola, Trustees of the Joseph Roth Trust under Agreement dated the 5th day of November, 2004 conveyed the property to The Roth Farm, LLC via Quitclaim Deed recorded at 931/650 on 12/26/2017. This is subsequent to SWN Production Company, LLC obtaining the Oil and Gas Lease dated 10/2/2017 and recorded at 931/199. Therefore, SWN Production Company, LLC has the authority to operate thereunder.</i>						0.00%
2)	04-00R7-0023-0000	Alice M. Edge, a/k/a Alice Mac Edge, widow	SWN Production Company, LLC	18.00%	976/502	0.00%
3)	04-00R4-0007-0000	William H. McClure and Margaret A. McClure, husband and wife	Fossil Creek Ohio, LLC Gulfport Energy Corporation American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	873/361 893/379 909/775 946/405	0.00%
4)	04-00R4-0005-0000	Roman Catholic Diocese of Wheeling-Charleston, by Michael J. Bransfield, Bishop	SWN Production Company, LLC	18.00%	930/391	0.00%
5)	04-00R7-0018-0000	The City of Wheeling	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.50%	936/710 980/572	0.00%
6)	04-00R7-0028-0000	Mark E. Stewart, single, and LeeAnn Geiger, single	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	942/665 980/572	0.00%
7)	02-0CV4-0003-0000	Timothy Joseph Fedorke	SWN Production Company, LLC	18.00%	966/566	0.00%
		Aaron Patrick Fedorke and Rachel Sue Fedorke, husband and wife	SWN Production Company, LLC	18.00%	966/560	0.00%
8)	04-00R7-0037-0000	Timothy Joseph Fedorke, single	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	942/18 980/572	0.00%
9)	04-00R7-0027-0001	Exle Delaney, II	SWN Production Company, LLC	18.00%	947/1	0.00%
10)	02-0CV3-0007-0001	Kenneth J. Cupp, a/k/a Kenneth Joseph Cupp, a single man	TH Exploration, L.L.C. American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	896/100 958/126 980/572	0.00%
11)	02-0CV3-0008-0000	Kenneth J. Cupp, a/k/a Kenneth Joseph Cupp, a single man	TH Exploration, L.L.C. American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	896/100 958/126 980/572	0.00%
12)	02-0CV3-0009-0000	Philip J. Haleski and Sandra K. Haleski, husband and wife	SWN Production Company, LLC	18.00%	940/388	0.00%
13)	02-0CV4-0022-0001	Jack W. Klein, Jr. and Brenda J. Klein, husband and wife	TH Exploration, L.L.C. American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	893/505 958/126 980/572	0.00%
14)	02-0CV3-0013-0000	Wilbert E. Myers, III and Jacqueline S. Myers	SWN Production Company, LLC	17.00%	977/749	0.00%
15)	02-0CV3-0012-0000	Randell L. Hinkle a/k/a Randall L. Hinkle and Dartene Hinkle, his wife	SWN Production Company, LLC	15.00%	958/36	0.00%
16)	04-00R7-0031-0000	Warwood Land Co., L.L.C.	American Petroleum Partners Operating, LLC SWN Production Company, LLC	18.00%	934/797 980/572	0.00%
17)	CHERRY HILL RD	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	20.00%	101/71/69	0.00%
18)	04-00R7-0039-0000	John Lloyd Johnson, single	SWN Production Company, LLC	18.00%	935/557	0.00%
19)	04-0R10-0029-0000	SWN Production Company, LLC (Company Owned Minerals)	N/A	N/A	993/349	0.00%
20)	04-0R10-0023-0000	Earl T. Beabout, Jr. and Linda L. Beabout, his wife	SWN Production Company, LLC	18.00%	1015/688	0.00%
21)	04-0R10-0029-0001	SWN Production Company, LLC (Company Owned Minerals)	N/A	N/A	993/349	0.00%
22)	04-0R10-0031-0000	Jessica B. Hogan, a single woman W. Neil Hogan, III, a single man Mary Ann Hess Realty, LLC	SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 18.00% 18.00%	932/362 934/287 934/279	0.00%
23)	04-0R11-0005-0000	Jessica B. Hogan, a single woman W. Neil Hogan, III, a single man Mary Ann Hess Realty, LLC	SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 18.00% 18.00%	932/362 934/287 934/279	0.00%
24)	04-0R11-0002-0004	Christopher Scott Golden and Brandace Lynn Golden, husband and wife Bounty Minerals LLC	American Petroleum Partners Operating, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 18.00% 18.00%	932/101 980/572 938/783	0.00%
25)	04-0R11-0002-0013	Bounty Minerals LLC	SWN Production Company, LLC	18.00%	939/4	0.00%
26)	04-0R11-0002-0007	Bounty Minerals LLC	SWN Production Company, LLC	18.00%	939/4	0.00%
27)	04-0R11-0002-0002	Daniel T. Doyle and Lucinda E. Doyle, husband and wife	Fossil Creek Ohio, LLC Gulfport Energy Corporation American Petroleum Partners Operating, LLC SWN Production Company, LLC	20.00%	871/740 893/392 909/775 946/405	0.00%
28)	04-0R11-0002-0010	Daniel T. Doyle and Lucinda E. Doyle, husband and wife	SWN Production Company, LLC	18.00%	1000/169	0.00%
29)	04-0R11-0002-0009	Daniel T. Doyle and Lucinda E. Doyle, husband and wife	SWN Production Company, LLC	18.00%	1000/169	0.00%
30)	04-0R11-0001-0000	Ellen Clarice Mull, divorced and not remarried; Edward Albert Neitzel, Jr., divorced and not remarried; and Mary Anne Anderson, divorced and not remarried	American Petroleum Partners Operating, LLC SWN Production Company, LLC	19.00%	947/786 980/572	0.00%
31)	04-R14A-0053-0006	United Bank, a Virginia Corporation	SWN Production Company, LLC	15.00%	1019/700	0.00%
32)	04-R14A-0053-0004	United Bank, a Virginia Corporation	SWN Production Company, LLC	15.00%	1019/700	0.00%
33)	04-R14A-0053-0007	United Bank, a Virginia Corporation	SWN Production Company, LLC	15.00%	1019/700	0.00%
		Robert D. Kennen & Delilah L. Kennen, husband and wife	SWN Production Company, LLC	18.00%	1025/133	0.00%
34)	04-0R14-0004-0006	James A. Schmitt, a single man	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	835/165 884/753	0.00%
35)	04-R14A-0053-0000	Elias E. Joseph and Elizabeth A. Joseph, husband and wife	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	816/109 884/373	0.00%

END OF EXHIBIT "A"



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

July 20, 2022

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

RE: SWN's proposed New Well: Roth OHI 206H in Ohio County, West Virginia, Drilling under Reilly Delaplain Road, Cherry Hill Road, B and B Lane, and Shiloh Vly.

Dear Mr. Brewer:

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

Respectfully,

SWN Production Company, LLC

A handwritten signature in black ink, appearing to read "Gavin Nadeau".

Gavin Nadeau, RPL
Landman

A handwritten signature in red ink, appearing to read "R. V.". Below the signature is a red stamp with the text "The Right People doing the Right Things, wisely investing the cash flow from the underlying Asset." and a date stamp "09/09/2022".

The Right People doing the Right Things,
wisely investing the cash flow from the
underlying Asset. 09/09/2022

WW-6AC
(1/12)

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

Date of Notice Certification: 8/14

API No. 47- 009 - _____
Operator's Well No. Roth OHI 206H
Well Pad Name: Roth OHI

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>526,663.693</u>
County: <u>069-Ohio</u>		Northing: <u>4444580.169</u>
District: <u>Richland</u>	Public Road Access: <u>Clearview Avenue</u>	
Quadrangle: <u>Wheeling</u>	Generally used farm name: <u>Roth</u>	
Watershed: <u>Upper Ohio- Wheeling</u>		

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

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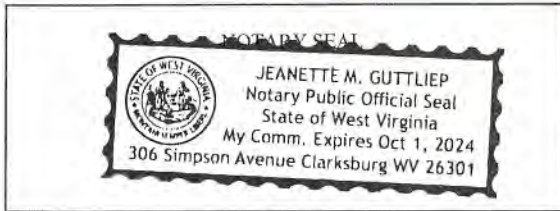
Required Attachments:

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

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>



Subscribed and sworn before me this 28 day of July 22.

Jeanette M Guttliet Notary Public

My Commission Expires 10/01/2024

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.

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

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

Date of Notice: 8/14 Date Permit Application Filed: 8/14

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: Roth Farm, LLC
 Address: 423 Clearview Avenue
Wheeling, WV 26003
 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: Alliance Resources GP, LLC
 Address: 2596 Battle Run Road
Triadelphia, WV 26059
 COAL OPERATOR
 Name: _____
 Address: _____

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

Name: None
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
 Address: _____

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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(8-13)

API NO. 47-009 - _____
OPERATOR WELL NO. Roth OHI 206H
Well Pad Name: Roth OHI _____

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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API NO. 47- 009 -
OPERATOR WELL NO. Roth OHI 206H
Well Pad Name: Roth OHI

Notice is hereby given by:

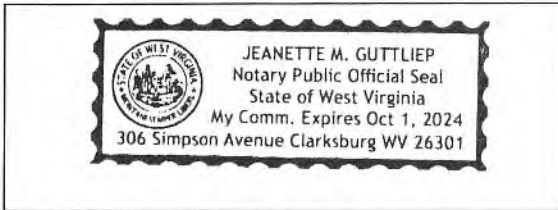
Well Operator: SWN Production Co., LLC
Telephone: 304-884-1610
Email: Brittany_Woody@swn.com

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 29 day of July 22.
Jeanette M Guttliet Notary Public
My Commission Expires 10/01/2024

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

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

Date of Notice: 2/3/2022 **Date of Planned Entry:** 2/10/2022

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)
 Name: The Roth Farm, LLC
 Address: 423 Clearview Avenue
 Wheeling, WV 26003
 Name: _____
 Address: _____
 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: Alliance Resources GP, LLC
 Address: 2596 Battle Run Road
 Triadelphia, WV 26059

MINERAL OWNER(s)
 Name: The Roth Farm, LLC
 Address: 423 Clearview Avenue
 Wheeling, WV 26003
 *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: 40.15163347, -80.67956229
County: Ohio	Public Road Access: Clearview Avenue
District: Richland	Watershed: Upper Ohio-Wheeling
Quadrangle: Tiltonsville, OH Quad	Generally used farm name: The Roth Farm, LLC

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 Pierport 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.

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

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

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

Date of Notice: 07/20/2022 **Date Permit Application Filed:** 8/19

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

- HAND DELIVERY
- CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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

Name: The Roth Farm, LLC
Address: 423 Clearview Avenue
Wheeling, WV 26003

Name: _____
Address: _____

Notice is hereby given:

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

State:	West Virginia	UTM NAD 83	Easting:	526,663.693
County:	Ohio		Northing:	4,444,580.169
District:	Richland	Public Road Access:	Clearview Avenue	
Quadrangle:	Tiltonsville 7.5', OH	Generally used farm name:	Roth OHI	
Watershed:	Upper Ohio - Wheeling			

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: P.O. Box 1300
Jane Lew, WV 26378
Telephone: 304-884-1675
Email: Justin_Booth@swn.com
Facsimile: _____

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

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 07/20/2022 **Date Permit Application Filed:** 8/19

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)

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

Name: The Roth Farm, LLC Name: _____
 Address: 423 Clearview Avenue Address: _____
 Wheeling, WV 26003 _____

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:	526,663.693
County:	Ohio		Northing:	4,444,580.169
District:	Richland	Public Road Access:	Clearview Avenue	
Quadrangle:	Tiltonsville 7.5', OH	Generally used farm name:	Roth OHI	
Watershed:	Upper Ohio - Wheeling			

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: P.O. Box 1300
 Telephone: 304-884-1675 Jane Lew, WV 26378
 Email: Justin_Booth@swn.com Facsimile: _____

Oil and Gas Privacy Notice:

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09/09/2022



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505D. Alan Reed, P.E.
State Highway EngineerJimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

July 18, 2022

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304Subject: DOH Permit for the Roth Pad, Ohio County
Roth OHI 206H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2022-0084 which has been issued to Southwestern Energy for access to the State Road for a well site located off Ohio County Route 4 SLS MP 2.39.

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,

Handwritten signature of Gary K. Clayton in blue ink.

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G CoordinatorCc: Brittany Woody
Southwestern Energy
CH, OM, D-6
File

Attachment VI Frac Additives

Product Name	Product Use	Chemical Name	CAS Number
AI-303 (U.S. Well Services)	Mixture	Ethylene glycol	107-21-1
		Cinnamaldehyde	104-55-2
		Butyl cellosolve	111-76-2
		Formic acid	64-18-6
		Polyether	Proprietary
		Acetophenone, thiourea, formaldehyde polymer	68527-49-1
AP ONE (U.S. Well Services)	Breaker	Ammonium persulfate	7727-54-0
Bactron K-139 (Champion Technologies)	Biocide	Glutaraldehyde	111-30-8
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Bactron K-219 (Champion Technologies)	Biocide	Methanol	67-56-1
		Quaternary Ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
CarboNRT	Tracer	Ceramic Proppant	66402-68-4
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
Econo-Cl200 (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, Exoxygenated 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, Exoxygenated	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, Exoxygenated	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
Plexad 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
MC MX 8-4743	Specialty Product	Phosphonic Acid Salt	Proprietary
		Sodium Nitrate	7631-99-4

SHEET INDEX

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- 2 GENERAL NOTES
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- 6 BOREHOLE LOCATIONS
- 7 OVERALL GRADING & ESC PLAN
- 8 GEOMETRIC LAYOUT PLAN
- 9-13 ACCESS ROAD PLAN & PROFILE
- 14-22 ACCESS ROAD CROSS SECTIONS
- 23 WELL PAD BASELINE PLAN
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- 25 WELL PAD PROFILE
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- 29 CULVERT PROFILES
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APPROVED
WVDEP OOG
4/18/2022

SOUTHWESTERN PRODUCTION COMPANY, LLC PROPOSED CONSTRUCTION PLANS FOR ROTH PAD OHIO COUNTY, WV APRIL 2022

LOCAL EMERGENCY SERVICES	
NAME:	NUMBER:
AMBULANCE	911
HOSPITAL EMERGENCY ROOM	(304) 243-3200
FIRE DEPARTMENT	911
POICE DEPARTMENT	911
POISON CONTROL CENTER	(800) 222-1222



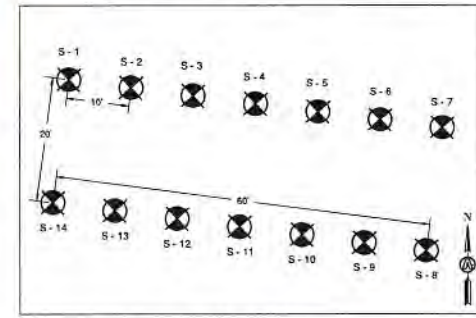
LOCATION COORDINATES		
ACCESS ROAD ENTRANCE:		
LATITUDE: 40.151269 N	LONGITUDE: 80.579726 W	(DECIMAL DEGREES)
LATITUDE: 40°09'4.57" N	LONGITUDE: 80°40'46.89" W	(DEGREES MINUTES SECONDS) (WV SP-43, FEET)
NORTHING: 603623.0001	EASTING: 163073.6812	(UTM ZONE 17, METERS)
NORTHING: 4444598.01	EASTING: 527278.58	(UTM ZONE 17, METERS)
WELL PAD CENTER:		
LATITUDE: 40.151112° N	LONGITUDE: 80.588833° W	(DECIMAL DEGREES)
LATITUDE: 40°09'14.00" N	LONGITUDE: 80°41'12.60" W	(DEGREES MINUTES SECONDS) (WV SP-43, FEET)
NORTHING: 603598.0478	EASTING: 1636759.0867	(UTM ZONE 17, METERS)
NORTHING: 4444578.53	EASTING: 526677.77	(UTM ZONE 17, METERS)

LIMITS OF DISTURBANCE BY PROPERTY:		
PROPERTY#	PROPERTY OWNER	ACRES DISTURBED
35-04-007-0024-0000	ROTH FARM, LLC	34.81 AC

TOTAL DISTURBED AREA: 34.81 ACRES
ROAD DISTURBED AREA: 24.35 ACRES
PAD DISTURBED AREA: 10.46 ACRES

EARTH WORK SUMMARY	
TOTAL CUT:	116,550 CY
TOTAL FILL:	93,790 CY
TOPSOIL: ASSUMED 10" (AVG. DEPTH)	22,890 CY

SKIN QUOTE ESTIMATE		
Description	Unit	Qty
MOBILIZATION & DEMOBILIZATION (LIMITED TO 5% OF BASE BID)	LS	1
CLEARING & GRUBBING	AC	4.43
TOPSOIL STRIPPING, STOCKPILING, AND RECONSTRUCTION (ASSUMED 10" DEEP)	CY	22,890
EARTHWORK	CY	316,500
SOIL TO KEY'S DEEP (INCLUDES EXCAVATION, PIPE, STONE, FABRIC, & COLLECTION DRAINS) - (STONE BY SWN)	LF	4,133
WELL PAD CONTAINMENT BERM	LF	3,571
SEEDING & MULCHING (INCLUDES FERTILIZER)	AC	14.54
1.5" CRUSHED RUN LIMESTONE FOR WELL PAD (#1) - (PLACEMENT ONLY, STONE IS PURCHASED BY SWN)	TN	4,424
ASPH TO NO. 3 STONE FOR WELL PAD - (PLACEMENT ONLY, STONE IS PURCHASED BY SWN)	TN	6,043
INCUMENT STABILIZATION FOR WELL PAD (12")	SY	20,906
1.5" CRUSHED RUN LIMESTONE FOR ALIQUARY PAD (#1) - (PLACEMENT ONLY, STONE IS PURCHASED BY SWN)	TN	4,024
INCUMENT STABILIZATION FOR ALIQUARY PAD (12")	SY	4,750
1" OF 1/2" 5.5MM WEARING COURSE ASPHALT	TN	620
1" OF 25MM BASE COURSE ASPHALT	TN	3,380
INCUMENT STABILIZATION FOR ACCESS ROAD (12")	SY	2,485
STABILIZED CONSTRUCTION ENTRANCE - (STONE BY SWN)	EA	1
GUARDRAIL, INCLUDES (4) TERMINAL ENDS	LF	3,110
RIDGE LINED DITCH - (PLACEMENT ONLY - STONE BY SWN)	LF	3,990
ROCK CHECK DAMS - (PLACEMENT ONLY - STONE BY SWN)	EA	18
GRASS LINED DITCH WITH EROSION CONTROL BLANKET	LF	532
1" COMPOST FILTER SOCK	LF	642
18" COMPOST FILTER SOCK	LF	3,474
SUPER SILT FIBRE	LF	743
18" HOPE CULVERT	LF	152
24" HOPE CULVERT	LF	430
36" HOPE CULVERT	LF	120
STORM DRAIN INLET MODIFIED TYPE W	EA	4
DETAILED BUMP COMPETE (INCLUDES SLOPE PIPE, PIPE LEVEL SPREADERS, BOLLARDS, ETC. PER DETAIL SHEET 42) - (STONE BY SWN)	EA	6
12" THICK RIP-RAP SLUMP @ STA 129+30 - (STONE BY SWN)	SF	400
OUTLET PROTECTION - (PLACEMENT ONLY - STONE BY SWN)	EA	5



DRIVING DIRECTIONS

- 1) HEAD NORTH ON FORT PIERPOINT DR. 0.3 MILES
- 2) TURN RIGHT ONTO FORT PIERPOINT RD. 482 FEET
- 3) TURN RIGHT ONTO CHEAT RD. 0.8 MILES
- 4) TURN LEFT TO MERGE ONTO I-68 W TOWARD I-79 0.5 MILES
- 5) MERGE ONTO I-68 W. 6.1 MILES
- 6) TAKE THE EXIT ONTO I-79 N TOWARD WASHINGTON. 45.3 MILES
- 7) TAKE THE EXIT ONTO I-76 W-I-79 N TOWARD WASHINGTON. 24.7 MILES
- 8) TAKE EX-11 COUNTY HIGHWAY 41, DALLAS PIKE. 0.2 MILES
- 9) CONTINUE ON DALLAS PIKE. 1.8 MILES
- 10) TURN RIGHT ONTO US 40 EAST. 0.5 MILES
- 11) TURN LEFT ONTO DIXONS RUN ROAD, 2.8 MILES
- 12) TURN LEFT ONTO COUNTY HIGHWAY 33/ DEMENT CEMETARY. 1.2 MILES
- 13) TURN RIGHT ONTO WV 89 NORTH. 0.8 MILES
- 14) TURN LEFT ONTO GREGGOSVILLE, CLINTON, AND POTOMAC ROAD. 1.8 MILES
- 15) TURN RIGHT ONTO TABLE ROCK LANE. 1.5 MILES
- 16) TURN LEFT ONTO CHERRY HILL ROAD/IGLENS RUN ROAD. 0.5 MILES
- 17) TURN RIGHT ONTO HIGHLAND ROAD. 0.6 MILES
- 18) TURN RIGHT ONTO CLEARVIEW AVE. 0.5 MILES

PROJECT COORDINATOR:
JOHN DUBOWSKI
CONSTRUCTION SUPERINTENDENT
SOUTHWESTERN PRODUCTION COMPANY, LLC
1300 FORT PIERPOINT DRIVE, SUITE 201,
MORGANTOWN, WV 26508
PHONE: (304) 884-1571
EMAIL: JOHN.DUBOWSKI@SWN.COM

ENGINEER:
MICHAEL NESTOR, PE
ASCENT CONSULTING & ENGINEERING
2351 DAVISSON RUN ROAD
CLARKSBURG, WV 26301
PHONE: (304) 933-3463
EMAIL: MIKE@ASCENTCONSULTINGENGINEERS.COM

PROJECT MANAGER:
ERIC SHORR
ASCENT CONSULTING & ENGINEERING
2351 DAVISSON RUN ROAD
CLARKSBURG, WV 26301
PHONE: (304) 933-3463
EMAIL: ERIC@ASCENTCONSULTINGENGINEERS.COM

ENVIRONMENTAL:
WETLANDS OR SURFACE WATER INFORMATION
WAS DELINEATED BY
ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC
DATED OCTOBER 2021

TOPOGRAPHIC INFORMATION:
HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE
NAD83 WEST VIRGINIA STATE PLANES, NORTH
ZONE, IN U.S. SURVEY FEET.

WEST VIRGINIA 811
CALL BEFORE YOU DIG!
IT'S THE LAW!

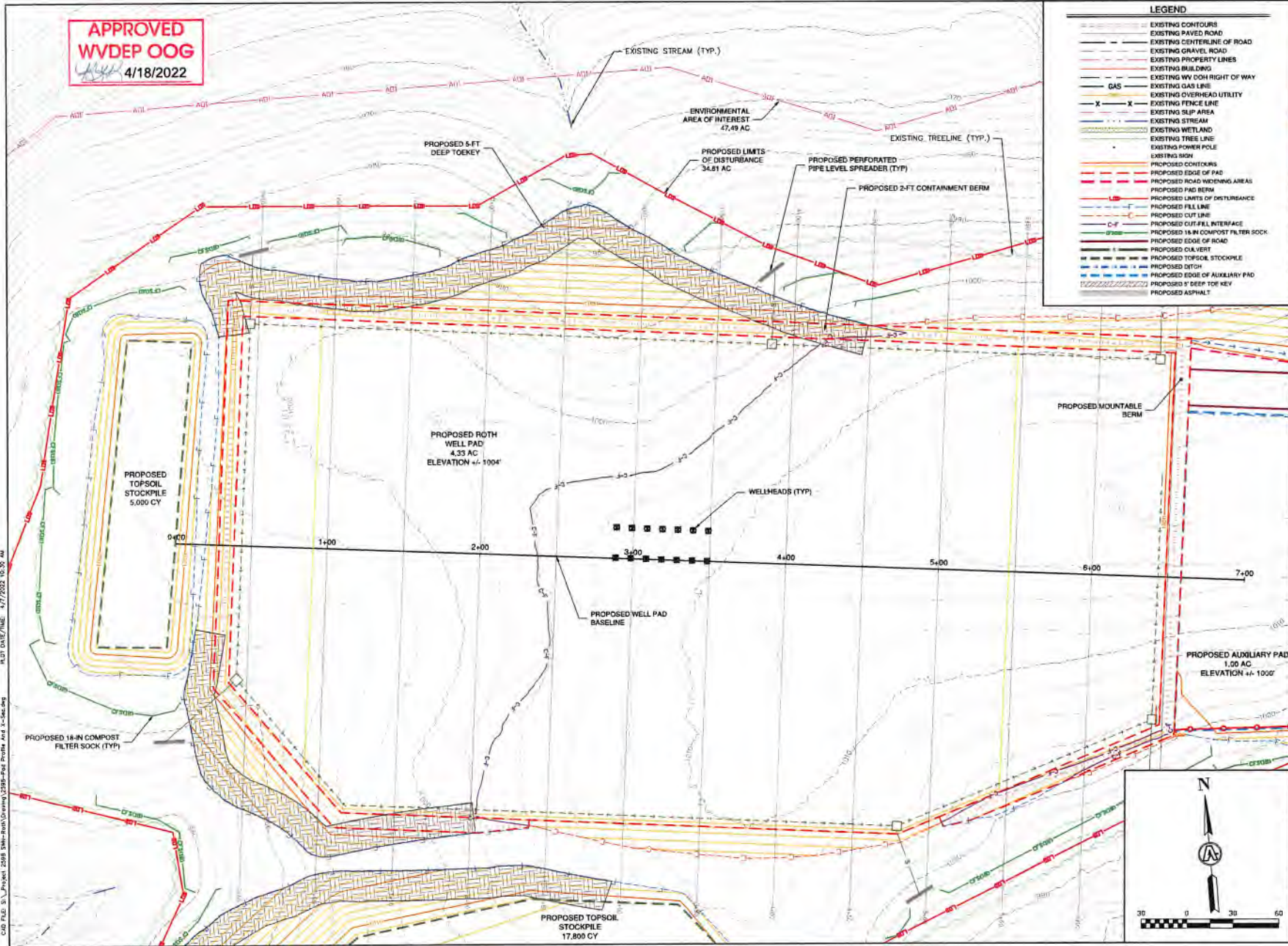
MISS UTILITY OF WEST VIRGINIA
1-800-245-6840
WEST VIRGINIA STATE LAW
(SECTION XIV, CHAPTER 24-C)
REQUIRES THAT YOU CALL TWO
BUSINESS DAYS BEFORE YOU DIG IN
THE STATE OF WEST VIRGINIA.
IT'S THE LAW!!!



2351 DAVISSON RUN ROAD
CLARKSBURG, WV 26301
WWW.ASCENTCONSULTINGENGINEERS.COM
(304) 933-3463

PROJECT NUMBER:	2598	DRAWN:	KWA
DATE:	4/7/2022	DESIGN:	EMS
SCALE:	AS SHOWN	CHECKED:	MRN
CONSTRUCTION PLANS FOR SWN PRODUCTION COMPANY, LLC ROTH PAD OHIO COUNTY, WV			
TITLE:	COVER SHEET		
PLAN STATUS:	APPROVED FOR PERMITS		SHEET No. 1

APPROVED
WVDEP OOG
4/18/2022



LEGEND

	EXISTING CONTOURS
	EXISTING PAVED ROAD
	EXISTING CENTERLINE OF ROAD
	EXISTING GRAVEL ROAD
	EXISTING PROPERTY LINES
	EXISTING BUILDING
	EXISTING WV DCRH RIGHT OF WAY
	EXISTING GAS LINE
	EXISTING OVERHEAD UTILITY
	EXISTING FENCE LINE
	EXISTING SLIP AREA
	EXISTING STREAM
	EXISTING WETLAND
	EXISTING TREE LINE
	EXISTING POWER POLE
	EXISTING SIGN
	PROPOSED CONTOURS
	PROPOSED EDGE OF PAD
	PROPOSED ROAD WIDENING AREA
	PROPOSED PAD BERM
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED FILL LINE
	PROPOSED CUT LINE
	PROPOSED CUT/FILL INTERFACE
	PROPOSED 18-IN COMPOST FILTER SOCK
	PROPOSED EDGE OF ROAD
	PROPOSED CULVERT
	PROPOSED TOPSOIL STOCKPILE
	PROPOSED 5-FT DEEP TOE KEY
	PROPOSED EDGE OF AUXILIARY PAD
	PROPOSED 2-FT DEEP TOE KEY
	PROPOSED ASPHALT

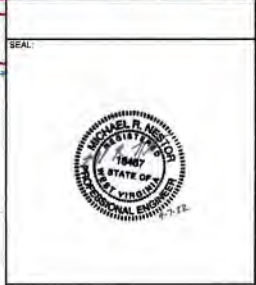


LOCATION MAP NOT TO SCALE

6		
5		
4		
3		
2		
1		

NO.	DATE	DESCRIPTION

PREPARED FOR:
SWN
Southwestern Energy®



PREPARED BY:
ASCENT
Consulting & Engineering

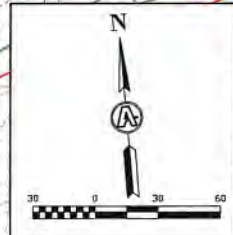
2361 DAVISSON RUN ROAD
CLARKSBURG, WV 26301
WWW.ASCENTCONSULTINGENGINEERS.COM
(304) 333-3493

PROJECT NUMBER:	2598	DRAWN:	KWA
DATE:	4/7/2022	DESIGN:	EMS
SCALE:	AS SHOWN	CHECKED:	MRN

CONSTRUCTION PLANS FOR
SWN PRODUCTION COMPANY, LLC
ROTH PAD
OHIO COUNTY, WV

TITLE:
ROTH WELL PAD BASELINE

PLAN STATUS:	APPROVED FOR PERMITS	SHEET No.	23
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CAD FILE: S:_Project_2598_SWN-ROTH\Drawings\2598-Roth-Plan-4-1-23.dwg
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