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west virginia department of environmental protection

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

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

Monday, May 23, 2022  
WELL WORK PERMIT  
Horizontal 6A / New Drill

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

Re: Permit approval for OCC-A OHI 601H  
47-069-00343-00-00

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

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

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

A blue ink signature of James A. Martin, Chief, is written over a circular stamp. The stamp contains the text 'James A. Martin Chief' and a small blue square icon.

James A. Martin  
Chief

Operator's Well Number: OCC-A OHI 601H  
Farm Name: THE BOARD OF COMMISSIONERS  
U.S. WELL NUMBER: 47-069-00343-00-00  
Horizontal 6A New Drill  
Date Issued: 5/23/2022

Promoting a healthy environment.

05/27/2022

# PERMIT CONDITIONS

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

## CONDITIONS

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

API Number: \_\_\_\_\_

## PERMIT CONDITIONS

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

05/27/2022

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

1) Well Operator: SWN Production Co., LLC 494512924 069-Ohio 7-Triadel 648-Valley Groev  
Operator ID County District Quadrangle

2) Operator's Well Number: OCC-A OHI 601H Well Pad Name: OCC A OHI Pad

3) Farm Name/Surface Owner: Board of Commissioners Ohio County Public Road Access: Rodney's Point Run

4) Elevation, current ground: 1095' Elevation, proposed post-construction: 1095'

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

MSK 3/8/2022

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus. Up-Dip well to the North, Target Top TVD- 6152', Target Base TVD- 6213', Anticipated Thickness- 61', Associated Pressure- 4065

8) Proposed Total Vertical Depth: 6192'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22797'

11) Proposed Horizontal Leg Length: 15298.80

12) Approximate Fresh Water Strata Depths: 393'

13) Method to Determine Fresh Water Depths: Deepest Nearby Water Well

14) Approximate Saltwater Depths: 586'- Salinity Profile

15) Approximate Coal Seam Depths: 462'

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16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of. APR 20 2022

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

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



WW-6B  
(04/15)

4706900343  
 API NO. 47-009  
 OPERATOR WELL NO. OCC-A OHI 601H  
 Well Pad Name: OCC A OHI Pad

18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	126'	126'	CTS
Fresh Water	13 3/8"	New	11-40	40#	532'	532'	513 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	1900'	1900'	819 sx/CTS
Production	5 1/2"	New	P-110 HP	23#	22797'	22797'	Tail 4402sx; 100' Inside Intermediate
Tubing							
Liners							

*Handwritten:* JGK 3/8/2022

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"	0.360	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:				

WW-6B  
(10/14)

API NO. 47- 009 - \_\_\_\_\_  
OPERATOR WELL NO. OCC-A OHI 601H  
Well Pad Name: OCC A OHI Pad

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

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

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.9

22) Area to be disturbed for well pad only, less access road (acres): 3.0

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

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25) Proposed borehole conditioning procedures:

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

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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) <small>up to 3%</small>	<del>XXXXXXXXXX</del>	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
COAL PROTECTION <small>up to 3%</small>	<del>XXXXXXXXXX</del>	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	<del>XXXXXXXXXX</del>	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	<del>XXXXXXXXXX</del>	INTEGRA SEAL	CJ600	LOST CIRC MATERIAL	CELLOPHANE FLAKES	9005-81-6
	CemNet	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	LOST CIRC MATERIAL	COATED FIBERGLASS FIBERS	PROPRIETARY
	SUGAR	SUGAR	CJ795	CMT RETARDER	SUCROSE	57-50-1
	S001	A-7P	CJ110	ACCELERATOR	CALCIUM CHLORIDE	10043-52-4
PRODUCTION	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ111	ACCELERATOR	SODIUM CHLORIDE	7440-23-5
	<del>XXXXXXXXXX</del>	SS-11W	CJ880	SURFACTANT	NONIONIC SURFACTANT	6540-99-4
	D047	FP 28L	<del>XXXXXXXXXX</del>	LIQUID ANTIFOAM AGENT	POLYPROPYLENE GLYCOL	25322-69-4
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJX157011	SOLID ANTIFOAM AGENT	FULLERS EARTH(ATTAPULGITE)	8031-18-3
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ540	HP FLUID LOSS ADDITIVE	ALIPHATIC AMIDE POLYMER	PROPRIETARY
	D255	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	MED TEMP FLUID LOSS ADDITIVE	POLYACRILIC POLYMER	PROPRIETARY
	<del>XXXXXXXXXX</del>	<del>XXXXXXXXXX</del>	CJ213	RETARDER	CHRYSTALLINE SILICA	14808-60-7
	<del>XXXXXXXXXX</del>	FL-66	CJ501	LOW TEMP FLUID LOSS ADD	POWDERED POLYSACCHARIDE	PROPRIETARY
	<del>XXXXXXXXXX</del>	BENTONITE	CJ020	EXTENDER	BENTONITE	1302-78-9
	D208	ASA-301	<del>XXXXXXXXXX</del>	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: OCC A OHI 601  
 Field: PANHANDLE FIELD WET  
 County: OHIO  
 SHL: 40.0793 Latitude -80.5981 Longitude  
 BHL: 40.1168 Latitude -80.6317 Longitude  
 KB Elev: 1,122 ft MSL

Re-entry Rig: TBD  
 Prospect: Marcellus Shale  
 State: WV  
 KB: 26 ft AGL  
 GL Elev: 1,096 ft MSL



PROD TOC Lead @ 2,000' MD  
 PROD TOC Tail @ 5,526' MD

**TUBULAR DETAIL**

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	126'
Surface/Coal	13.375	48.0 #	H-40	0'	532'
Intermediate	9.625	36.0 #	J-55	0'	1,920'
Production	5.5	23.0 #	P-110 HP	0'	22,797'

**CEMENT DETAIL**

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	513	A	15.6
Intermediate:	819	A	15.6
Production:	4402	A	14.5-15.6



KOP at 6,522' MD

Freshwater Depth - 393' TVD  
 Coal Depth - 462' TVD  
 Saltwater Depth - 586' TVD  
 TVD - 6,192' TVD  
 TMD - 22,797'

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6,192' Target Center

TD at 22,797' MD  
 5,937' TVD

EOB at 7,490' MD  
 SHL Onondaga 6,213' TVD

Onondaga 5,958' TVD

7,490' to 22,797'  
 13.0-13.7

*MSGK 3/18/2022*



OCC A OHI 601H AOR

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
47-069-00248	SWN Production Company, LLC	Active	40.075895	-80.617583	6516'	Marcellus	Tully Limestone, Big Injun
47-069-00318	SWN Production Company, LLC	Active	40.158661	-80.651609	5938'	Marcellus	Tully Limestone, Big Injun

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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) Roney Point Run of Little Wheeling Creek Quadrangle Valley Grove

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 off with SOB 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? Meadowill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Watzel 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.

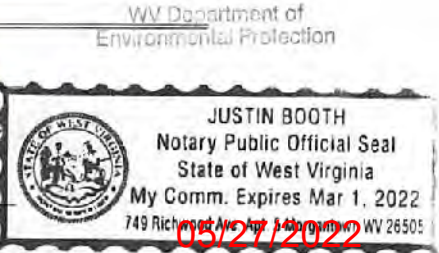
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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

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Subscribed and sworn before me this 17<sup>th</sup> day of FEBRUARY, 20 22

*Justin Booth* Notary Public  
My commission expires 3/1/2022



SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 17.9 Prevegetation pH \_\_\_\_\_

Lime as determined by pH test min.2 Tons/acre or to correct to pH 3.0

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

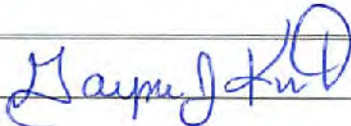
Attachment 3C

**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: 3/8/2022

Field Reviewed?  Yes  No

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## Attachment 3A

### CLOSED LOOP SYSTEM

The closed loop system is designed to eliminate the use of reserve pits by providing a higher level of solids control processing and using steel pits for capture of drill cuttings. The cuttings are then processed to achieve landfill requirements before hauling to approved landfills. The liquids are processed to recycle into the active mud system or to transfer to onsite temporary storage as needed.

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

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

### AIR DRILLING INTERVALS

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

### LIQUIDS DRILLING (FRESHWATER, BRINE, SOBM)

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

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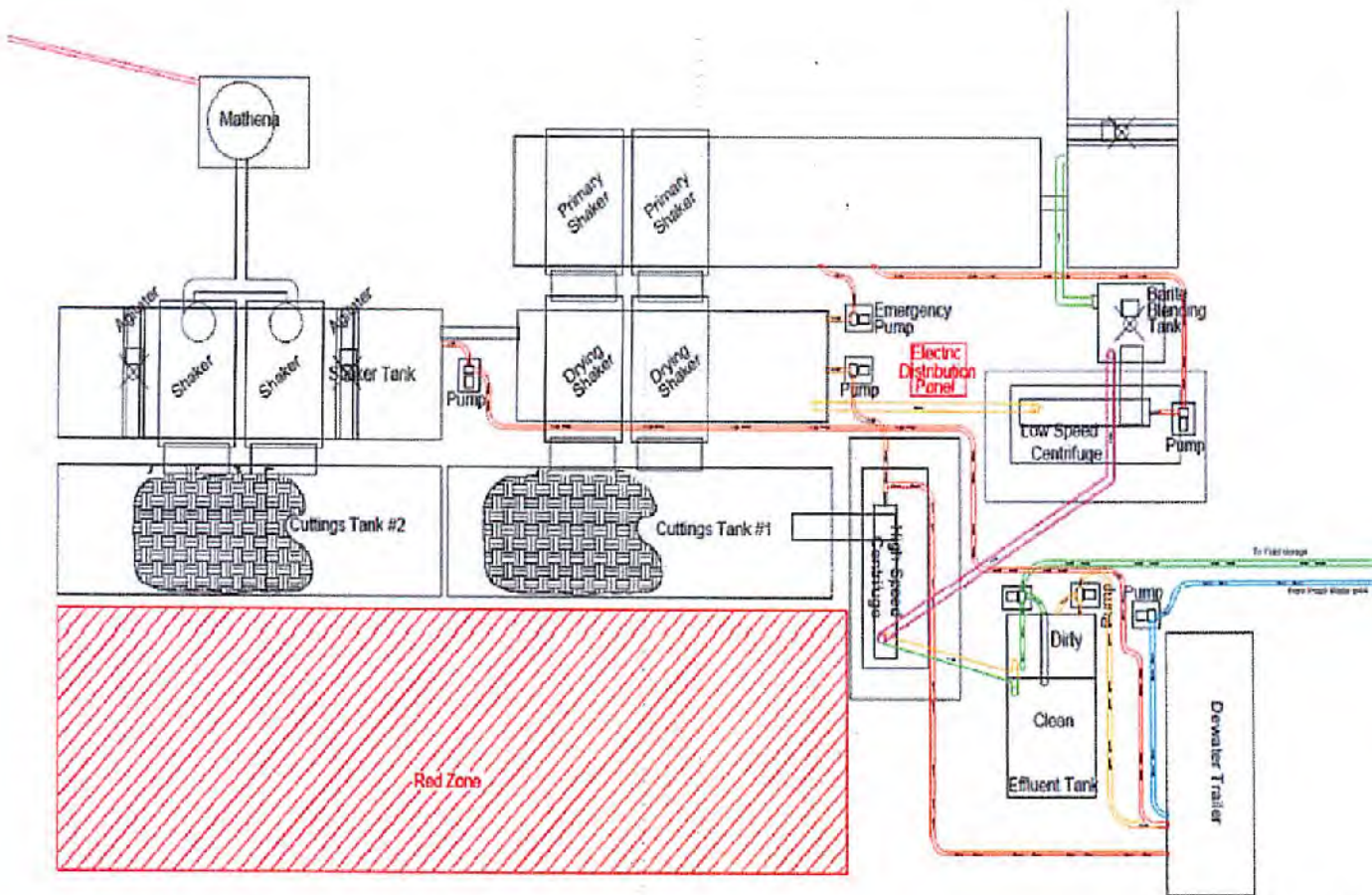
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# Solids Control Layout



EXAMPLE SCHEMATIC FOR CLOSED LOOP SOLIDS CONTROL SYSTEM



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

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

Air

Freshwater (if needed based on conditions)

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

Air

**Production Hole:**

Air

Synthetic Oil (Base Fluid for mud system)

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers



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# WVD Seeding Specification

R<sub>2</sub>  
A → V<sup>+</sup>

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

## NON-ORGANIC PROPERTIES

Seed Mixture: ROW Mix	SWN Supplied
Orchardgrass	40%
Timothy	15%
Annual Ryegrass	15%
Brown Top Millet	5%
Red Top	5%
Medium Red Clover	5%
White Clover	5%
Birdsfoot Trefoil	5%
Rough Bluegrass	5%

All legumes are inoculated 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

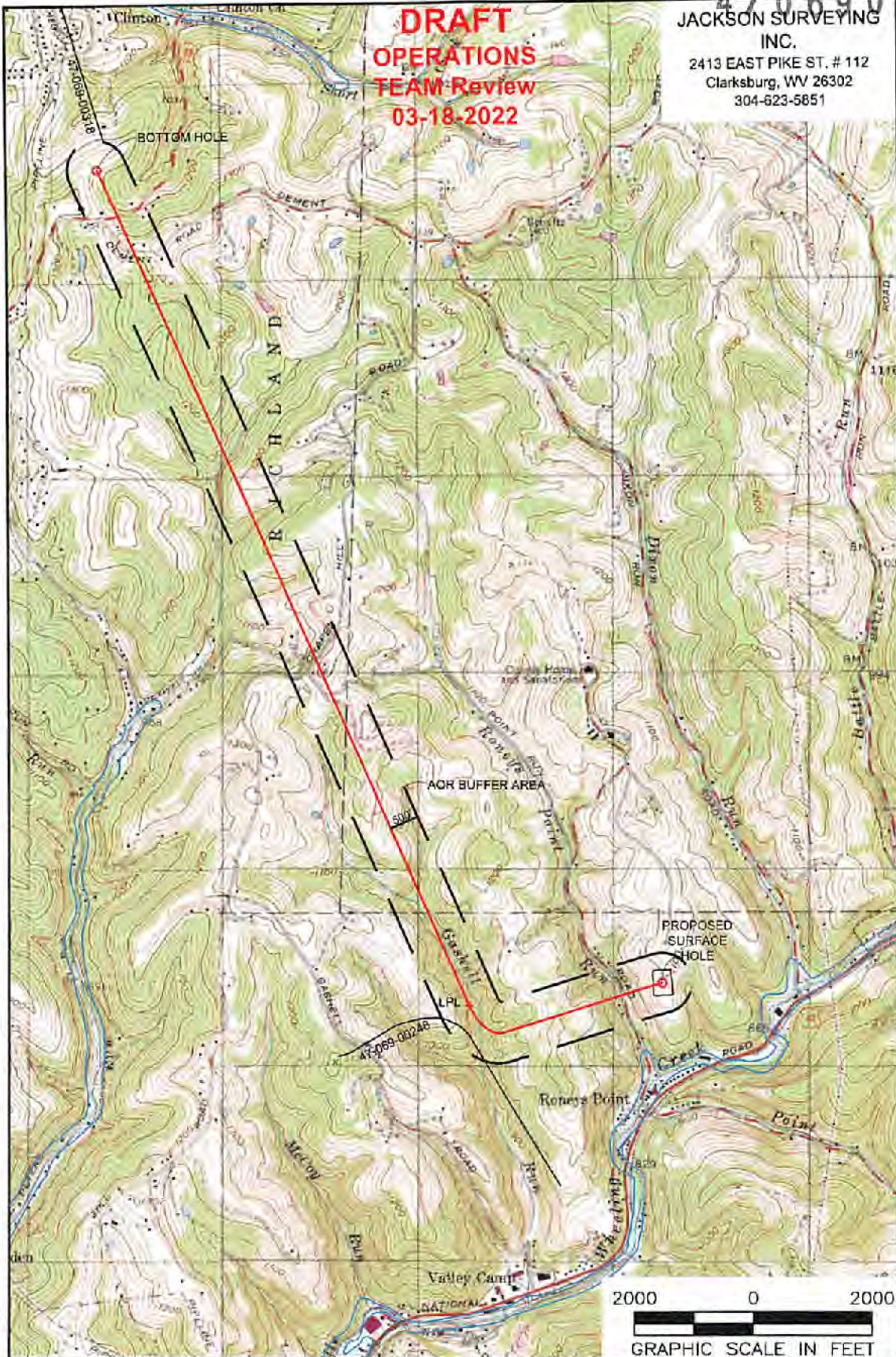
RECEIVED  
 Office of Oil and Gas  
 APR 20 2022  
 WV Department of Environmental Protection



4706900343

# DRAFT OPERATIONS TEAM Review 03-18-2022

JACKSON SURVEYING INC.  
2413 EAST PIKE ST. # 112  
Clarksburg, WV 26302  
304-623-5651



### 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. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
2. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

### LEGEND:

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

<b>WELL OPERATOR:</b> SWN PRODUCTION COMPANY, LLC	<b>WELL (FARM) NAME:</b> OCC-A OHI	<b>WELL #</b> 601H	<b>SERIAL #</b>
<b>ADDRESS:</b> 1300 FORT PIERPONT ROAD, SUITE 200, MORGANTOWN, WV 26508	<b>COUNTY</b> - CODE OHIO - 069	<b>DISTRICT:</b> TRIADELPHIA	
<b>SURFACE OWNER:</b> THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO	<b>USGS 7 1/2 QUADRANGLE MAP NAME</b> VALLEY GROVE, WV		

05/27/2022

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
47-069-00243	SWN Production Company, LLC	Active	40.075895	-80.617583	6516'	Marcellus	
47-069-00318	SWN Production Company, LLC	Active	40.158661	-80.651609	5938'	Marcellus	

4706900343



# MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



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

**API NO. 47-XXX-XXXXX**  
**WELL NAME: OCC A OHI 601H**  
**Valley Grove QUAD**  
**Triadelphia DISTRICT**  
**OHIO COUNTY, WEST VIRGINIA**

Submitted by:

Name: Brittany Woody

Date: 2/15/2022

*Brittany Woody*

Title: Senior Regulatory Analyst

SWN Production Co., LLC

Approved by:

Name: *Gayle J. Kn...*

Date: *3/8/2022*

Title: *Inspector*

Approved by:

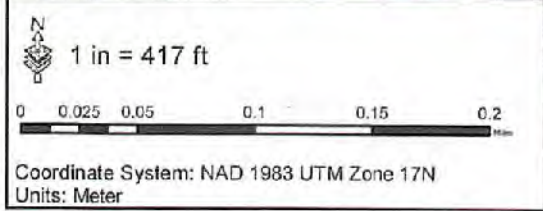
Name: \_\_\_\_\_

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

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

RECEIVED  
Office of Oil and Gas  
APR 20 2022  
WV Department of  
Environmental Protection





Spring	Parcel
Water Well	1500' Buffer
Pond	

Coordinates: 40.079317, -80.598057

Water Purveyor Map  
Well Pad: OCC A Pad  
County: OH

**swn**  $\frac{R^2}{A} \rightarrow V^2$   
Southwestern Energy

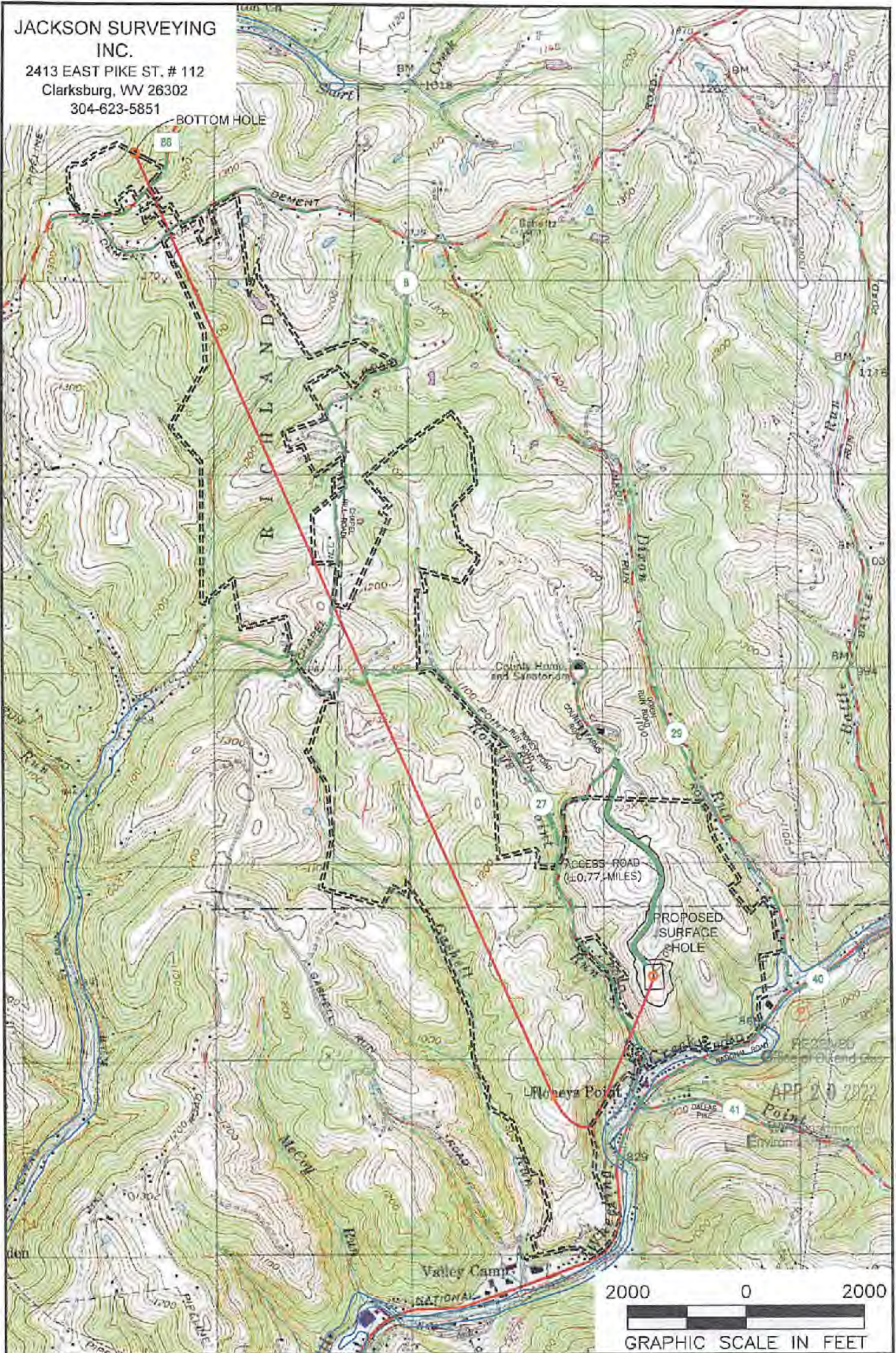
Date: 2/14/2022 Author: willisb

05/27/2022



**JACKSON SURVEYING  
INC.**

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



**NOTES ON SURVEY**

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

**LEGEND:**

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

05/27/2022

<b>WELL OPERATOR:</b> SWN PRODUCTION COMPANY, LLC	<b>WELL (FARM) NAME:</b> OCC-A OHI	<b>WELL #</b> 401H	<b>SERIAL #</b>
<b>ADDRESS:</b> 1300 FORT PIERPONT ROAD, SUITE 200, MORGANTOWN, WV 26508	<b>COUNTY - CODE</b> OHIO - 069	<b>DISTRICT;</b> TRIADDELPHIA	
<b>SURFACE OWNER:</b> THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO	<b>USGS 7 1/2 QUADRANGLE MAP NAME</b> VALLEY GROVE, WV		



Latitude: 40°05'00"

SURFACE HOLE 4,132'

Latitude: 40°07'30"

BOTTOM HOLE 1,867'

JACKSON SURVEYING INC.

2413 EAST PIKE ST. # 112
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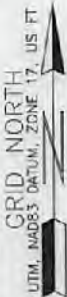
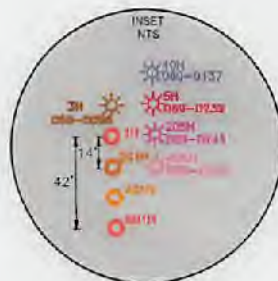
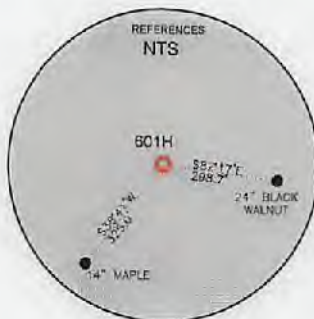
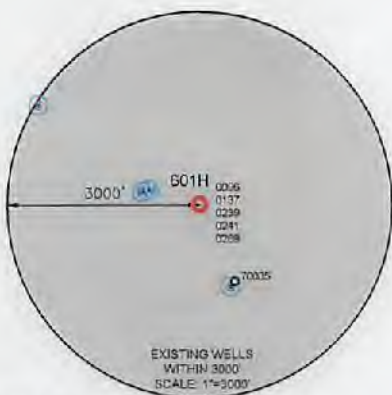


Table with 3 rows: SURFACE HOLE LOCATION (SHL), LANDING POINT LOCATION (LPL), BOTTOM HOLE LOCATION (BHL). Each row contains UTM coordinates (NORTHING, EASTING).

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

Table with 5 columns: LINE, BEARING, DISTANCE, CURVE LENGTH, DESCRIPTION. Contains line L3.

Longitude: 80°37'30" BOTTOM HOLE 2,990'
Longitude: 80°35'00" SURFACE HOLE 1,466'



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. 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.

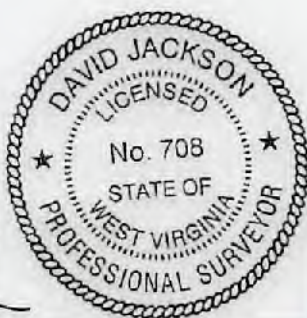
NOTES ON SURVEY

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

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

P.S. 708

David L Jackson



2000 0 2000

GRAPHIC SCALE IN FEET

COMPANY: SWN Production Company, LLC

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

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

OCC-A OHI
OPERATOR'S WELL #: 601H
API WELL #: 47 STATE 069 COUNTY 06343 PERMIT

WELL TYPE: OIL [ ] WASTE DISPOSAL [ ] PRODUCTION [x] DEEP [ ] GAS [x] LIQUID INJECTION [ ] STORAGE [ ] SHALLOW [x]
WATERSHED: RONEY POINT RUN OF LITTLE WHEELING CREEK OF WHEELING CREEK (HUC-10) ELEVATION: 1095.2'
DISTRICT: TRIADELPHIA COUNTY: OHIO QUADRANGLE: VALLEY GROVE, WV
SURFACE OWNER: THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO ACREAGE: ±262.85
OIL & GAS ROYALTY OWNER: THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO ACREAGE: ±262.85
DRILL [x] DRILL DEEPER [ ] REDRILL [ ] FRACTURE OR STIMULATE [x] PLUG OFF OLD FORMATION [ ] PERFORATE NEW FORMATION [ ]
CONVERT [ ] PLUG & ABANDON [ ] CLEAN OUT & REPLUG [ ] OTHER CHANGE [ ] (SPECIFY)
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,192 TVD 22,797 TMD

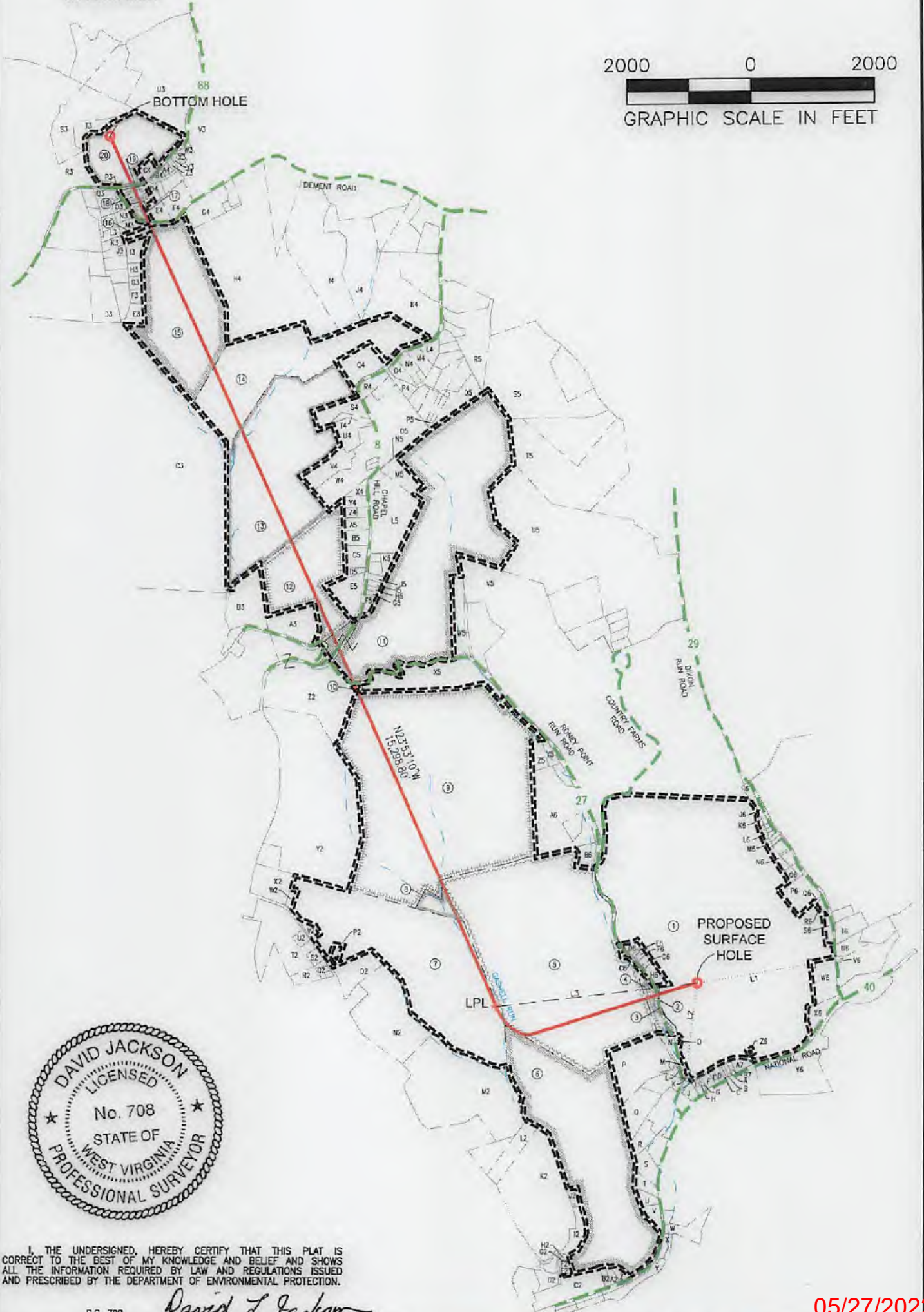
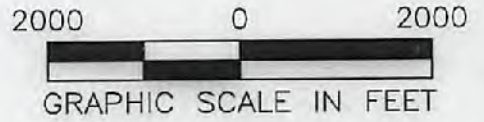
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:
Proposed Surface Hole / Bottom Hole (circle with cross)
Existing / Producing Wellhead (star)
LPL (star with cross)
Existing Water Well (circle with W)
Existing Spring (circle with S)
Surveyed Boundary (dashed line)
Drilling Unit (solid line)
Lease Boundary (thick dashed line)
Proposed Path (solid line)

REVISIONS:
DATE: 04-15-2022
DRAWN BY: N. MANO
SCALE: 1" = 2000'
DRAWING NO.
WELL LOCATION PLAT



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



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P.S. 708 *David L Jackson*

05/27/2022

REVISIONS:	COMPANY:			
	OPERATOR'S		OCC-A OHI	
	WELL #:		601H	
	DISTRICT:	COUNTY:	STATE:	DATE: 04-15-2022
	TRIADELPHIA	OHIO	WV	DRAWN BY: N. MANO
				SCALE: N/A
				DRAWING NO:
				WELL LOCATION PLAT 2



**JACKSON SURVEYING  
INC.**



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

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	BOARD OF COMM OHIO CO (S/R)	3-113-1
2	SURFACE OWNER (S)	TAX PARCEL
2	WV DEPARTMENT OF TRANSPORTATION (S)	ROUTE 27
3	HANNING RANDY DALE & BRENDA JOYCE (S)	6-T3-5.1
4	HANNING RANDY & BRENDA (S)	6-T3-5.2
5	MINCH TIMMY B & AMY LYNN (S)	6-T3-5
6	CROW RAYMOND E (S)	6-T8-7
7	SCOTT PAUL R & JOYCE A (S)	6-T3-3
8	HATCHER EDWARD A (S)	3-113-1.5
9	OGLEBAY FOUNDATION PROPS INC ANNA C MAXWELL REV TRUST (S)	3-113-1
10	OGLEBAY FOUNDATION PROPS INC MAXWELL ANNA C REV TRUST (S)	3-113-1.1
11	LUCHETTI ROBERT R SR - TODD (S)	3-110-23
12	LUCHETTI ROBERT R SR - TODD (S)	4-R15-28
13	PORTER SANDRA K (S)	4-R15-25
14	GOMPERS EDWARD D AND LINDA M (S)	4-R15-25.1
15	YOUNG TRAVIS & MICHELLE E (S)	4-R15-29
16	SCHMITT BRADLEY A & KAREN M (S)	4-R15-32.1
17	MILLER DANIEL P & CHRISTA M (S)	4-R15-20.2
18	FORD G QUINN & M A (S)	4-R12-10.3
19	WV DEPARTMENT OF TRANSPORTATION (S)	ROUTE 88
20	MULL W QUAY II TRUST (S)	4-R12-10.14

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	FISHER LOGAN J	6-T30-21
B	CLARK ROBERT B & EVELYN M	6-T30-23
C	SWAIN MARVIN H & K L	6-T30-22
D	PHK LLC	6-T30-21
E	HAMMONS TAMMY M	6-T30-20
F	MCDANIELS EDDIE L & MCDANIELS TRACY L	6-T30-19
G	P-3 EQUITIES LLC	6-T30-18.1
H	FLACK HOLLY M	6-T30-18
I	MCKENNA JOSEPH A III	6-T30-17
J	VALLEY COIN MACHINE COMPANY LLC	6-T30-16
K	BOARD OF COMM OHIO CO	6-T30-13
L	NELSON KENNETH L	6-T30-10
M	HUNTER JOHN A & C M	6-T30-11.1
N	HUNTER JOHN A & C M	6-T30-11
O	HUNTER JOHN A & C M	6-T30-12
P	BEABOUT RUSSELL W	6-T30-8
Q	PARSONS JOSEPH L & SALLY	6-T30-1
R	PARSONS JOSEPH L & SALLY	6-T88-1
S	NORMAN HOLLY LYNN	6-T8-8.2
T	GREEN GLORIA I & DAVID M	6-T8-8.3
U	MURRAY KENNETH W SR & WILBUR E JR	6-T8-8
V	CROW RAYMOND & SANDRA LEE	6-T8-8.4
W	EDGELL DEBORAH A	6-T8-32
X	EDGELL JOSEPH P & S J EDGELL EARL F (LIFE ESTATE)	6-T8-56
Y	PHK LLC	6-T8-58
Z	CROW RAYMOND & SANDRA	6-T8-7.3
A2	CROW RAYMOND & SANDRA L	6-T8-7.4
B2	CROW RAYMOND E JR & RANEE E	6-T8-7.2
C2	LD REALTY INC	6-T8-3
D2	LD REALTY INC	6-T8-3.9
E2	SCHREIBER JEREMY	6-T8-6.3
F2	PRITT SARAH	6-T8-6.2
G2	MATTIS KIMS & FAYE	6-T8-6.4
H2	MATTIS KIMS & FAYE	6-T8-6.1
I2	PETTIT DEBORAH	6-T8-3.3
J2	PETTIT DEBORAH	6-T8-60
K2	MARSHALL JASON A AND NICOLE D	6-T8-6.5
L2	BOREMAN THOMAS M E	6-T8-6
M2	GOMPERS JAMES C / D GOMPERS & ASSOCIATES	6-T3-4.2
N2	GOMPERS JAMES C	6-T3-4.1
O2	HINES MATTHEW B & AMBER L	6-T3-2
P2	KLEIN KALVIN K & LORI A	6-T3-3.3
Q2	PAUL WALTER JR, WALTER SR & CLARISSA L	6-T3-30
R2	PAUL WALTER R & CLARISSA	6-T2-32.6
S2	KUTYI JAMES J	6-T3-32
T2	GROVER WM C RACHEL D & TRAVIS B	6-T2-32
U2	ISALY JAY A	6-T3-31
V2	SCOTT RICHARD P; SCOTT LEAH C	6-T3-3.1
W2	MARSHALL KERRY A JR & PHILLIPS DANIELLE M	6-T3-3.2
X2	SPARKS JANET C & NOICE MELANIE	6-T2-31
Y2	MILLER FAMILY TRUST	4-R18-11
Z2	LUCHETTI ROBERT R JR & TERESA	4-R18-29
A3	CROBIN CHEYENNE & AMY	4-R15-28.5
B3	VESPA JOSEPH L	4-R15-28.2
C3	NICHOLS R E 3/8 INT, B L SNAPP 3/8 INT & M C NICHOLS 1/4 INT	4-R15-16
D3	JEWELL RYAN D & JENNIFER C	4-R15-32.21
E3	KASSERMAN RONALD WILLIAM KASSERMAN ELIZABETH A	4-R15-32.10
F3	MULL ADAM C & LAURA E	4-R15-32.9
G3	CONTRAGUERRO ROBERT C JR & CONTRAGUERRO KIMBERLY S	4-R15-32.8
H3	CONTRAGUERRO ROBERT C JR & CONTRAGUERRO KIMBERLY S	4-R15-32.7
I3	SCHMITT BRADLEY A & KAREN M	4-R15-32.14
J3	EDGMON JOHN D & DIANA K REV LIVING TRUST	4-R15-32.17
K3	EDGMON JOHN D & DIANA K REV TRUST	4-R15-32.3
L3	CONTRAGUERRO THOMAS	4-R15-32.15
M3	ZAMBITO CHRISTOPHER M & GINA	4-R15-32.12
N3	ZAMBITO CHRISTOPHER M & GINA	4-R15-32.13
O3	SABLE ANTHONY R & AMANDA	4-R15-32.6
P3	WEST RENTALS INC	4-R15-32

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
Q3	KUREISHY ZAVEN A	4-R15-32.2
R3	OGLEBAY FOUNDATION PROPS INC	4-R12-10.2
S3	WEST RENTALS INC	4-R12-10.16
T3	MULL W QUAY II TRUST	4-R12-10.17
U3	MULL W QUAY II TRUST	4-R12-12
V3	WEISS ROBERT L AND PATRICIA J IRREVOCABLE TRUST	4-R12-16
W3	FRANKLIN WOODS ESTATES HOMEOWNERS ASSC INC	4-R12-10.11
X3	STRAUB ENTERPRISES INC	4-R12-10.4
Y3	MARTIN TIMOTHY A & JANICE M	4-R12-10.10
Z3	MARTIN TIMOTHY A & J M	4-R12-10.6
A4	WELLING JAYSON & KARA C	4-R12-10.1
B4	MCCULLOUGH RHONDA JO	4-R12-10.12
C4	GAUDIO ROBERT & CLARE McDONALD	4-R12-11
D4	MENGEU BRIAN R & LISA M	4-R12-10.9
E4	NICKOLE TODD WILLIAM & ELISHA JEAN	4-R15-20.1
F4	MILLER HAROLD J JR & S D	4-R15-20
G4	DICKINSON JAMES F; ET AL	4-R15-23
H4	SIXTY FOUR LLC	4-R15-21
I4	TEMPLETON JOHN J DR & USA J CO-TRUSTEES	4-R15-23.3
J4	REGAN CHRISTOPHER J & HILARY E	4-R15-23.4
K4	KOWCHECK DRAKE M & CAITLIN	4-R15-25.6
L4	HARRIS RICHARD D & PATRICIA	3-110-17.2
M4	VAN DUSEN JOHN M II & VAN DUSEN AMANDA RAE	3-110-17.1
N4	DERROW STEPHEN J	3-110-17.4
O4	HERCULES EUGENE & CARMELINDA S	3-110-18
P4	HUFFNER EARL P	3-110-17.12
Q4	MARRINER ROBYN LEE	3-110-51
R4	WHITE KRISTIAN E & NICOLE	3-110-19.1
S4	MILLER CALVIN F & BARBARA J	3-110-25.5
T4	MATTERN KENNETH MARK & MATTERN DANA ANN	3-110-25.4
U4	PORTER MARK E & BARBARA V	4-R15-25.3
V4	SMITH PRESTON T & SARAH J	3-110-19.6
W4	A D BAKER HOMES INC	3-110-19
X4	A D BAKER HOMES INC	4-R15-26
Y4	SIMONS WILLIAM JR & THERESA M	4-R15-26.2
Z4	DIBARTOLOMEDO ROBERT	4-R15-33
A5	NEUMANN KAREN JENINE	4-R15-28.7
B5	ROGERSON RONALD EDWIN	4-R15-28.1
C5	WOOD MATHEW J	4-R15-28.3
D5	WOOD MATHEW J	4-R15-28.6
E5	LUCHETTI ROBERT R SR - TODD	4-R15-28.4
F5	MILLER CALVIN F & B J	4-110-25.1
G5	MILLER WILSON B	4-110-25
H5	MILLER CALVIN F & BARBARA J	3-110-25.5
I5	MATTERN KENNETH MARK & MATTERN DANA ANN	3-110-25.4
J5	CAREY WAYNE L	4-110-25.3
K5	WOOD MATHEW J & MARIA M	3-110-25.7
L5	A D BAKER HOMES INC	3-110-19.4
M5	LUCHETTI ROBERT R JR & TERESA	3-110-19.5
N5	WHITE KRISTIAN E & NICOLE R	3-110-23.2
O5	WHITE KRISTIAN E & NICOLE R	3-110-19.3
P5	MACNEALY ION A AND KAREN L	3-110-17.13
Q5	PALMER LOUIS III	3-110-17.16
R5	STINGLE KEVIN W & NICHOLE A	3-110-13.2
S5	WALTERS GLEN L & B S	3-110-28
T5	BYRUM CAROLINE LOUSTAU	3-110-27.3
U5	ABRAHAM THOMAS R & S O	3-110-26
V5	BOARD OF COMM OHIO CO	3-113-3.1
W5	OHIO COUNTY COMMISSION	3-110-23.3
X5	MAXWELL JOSEPH E ANNA C MAXWELL REVOCABLE TRUST	3-113-1.2
Y5	BENNETT JEFFREY R	3-113-2.2
Z5	WALTON LISA	3-113-2.3
A6	MINCH TIMMY B & AMY LYNN	3-113-2
B6	SHELLER CARL J	3-113-24
C6	KETRON TRACY E & JOHN P	6-T3-7.1
D6	DEER ALFRED	6-T3-6
E6	KETRON TRACY E & JOHN P	6-T3-7
F6	HUGHES JAMES R & DARLA J	6-T3-8
G6	SHORES BARBARA A	6-T3-9
H6	BOARD OF COMMISSIONERS	6-T3-10
I6	STEVENSON KIMBERLY; STEVENSON JAMES; DELGADO BRENDA STEVENSON	5-113-6.1
J6	LOVERIDGE TYSON L & VANESSA	3-113-6
K6	LOVERIDGE TYSON L & VANESSA	3-113-6.4
L6	WHEELER JAMES E III & WHEELER CHRISTINE	3-113-8.2
M6	WHEELER JAMES E JR & B J	3-113-9
N6	WHEELER JOLLY W SR & SARAH JANE (LE); ET AL	3-113-12.3
O6	SHEARER STEVEN P	3-113-12.1
P6	KNIGHT JAMES C & D L	3-113-13
Q6	DEMERSKI GARY I & MARY C	3-113-14
R6	BARON KEITH E & C J	3-113-15
S6	HOLMAN HARRY E & CHERYL L	6-T3-11
T6	HOLMAN CHERYL L & H E	6-T3-13
U6	MOORE GERALD T & A M	6-T3-14
V6	MOORE GERALD T & A M	6-T3-14.1
W6	OHIO COUNTY COMMISSION	6-T3-28
X6	JDS INVESTMENTS LLC	6-T3-16
Y6	GARRISON MELODY	6-T3-20
Z6	VILLAGE OF VALLEY GROVE	6-T30-27
A7	SUPERIOR INDUSTRIAL LAUNDRIES INC	6-T30-25
B7	STEPHAN PAULA C AND ORION E	6-T30-25

05/27/2022

REVISIONS:	COMPANY:	 	
	OPERATOR'S:	OCC-A OHI	
	WELL #:	601H	
	DISTRICT:	COUNTY:	STATE:
	TRIADPHIA	OHIO	WV
			DATE: 04-15-2022
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 3



**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
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See Exhibit A

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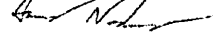
WV Department of  
Environmental Protection

**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"  
 OCCA 011401H  
 Ohio County, West Virginia

Attached is and makes part of the State of West Virginia Oil and Gas Form, "WV-6A", by SWN Production Company, LLC Operator

1	TRD	LESSOR	LESSEE	ROYALTY	BOOK	% INTEREST NOT LEASED BY SWN PRODUCTION COMPANY, LLC
1)	03-01-13-0014-000	The Board of Commissioners of Ohio County & The County Commission of Ohio County	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 25.00%	801771 815273	0.00% 0.00%
2)	US R08717-27	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	15.00%	991519	0.00%
3)	06-00-15-0005-0001	Caroline J. Harris, also Caroline J. Semmons, married, holding in her sole and separate property	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	875661 883279	0.00% 0.00%
4)	06-00-15-0025-0002	Caroline J. Harris, also Caroline J. Semmons, married, holding in her sole and separate property	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	875123 883279	0.00% 0.00%
5)	06-00-15-0005-0006	Anthony T. Assare, Jr. and Laine Marie Assare, husband and wife Steven L. Cook and Linda G. Cook, husband and wife Derek A. Marsh and Ceia S (neé, maiden) and wife Dennis P. Marsh, single Howard L. Marsh, Jr. and Ulrobert Marsh, husband and wife Stanislav A. Marsh, single Timothy D. Marsh and Amy Lynn Marsh, husband and wife Kerry Virginia Manning, Vera's husband and wife	SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00%	917433 917518 917414 917421 917511 917428 917391 917523	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%
6)	06-00-15-0005-0009	Raymond E. Crow and Sandra Lee Crow, husband and wife	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 15.00%	7951 883482	0.00% 0.00%
7)	06-00-15-0004-0009	Paul R. Scott and Evelyn E. Scott, husband and wife	Great Lakes Energy Partners, L.L.C. Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.50% 15.00% 15.00%	77583 808350 883490	0.00% 0.00% 0.00%
8)	07-00-13-0001-0003	Edward A. Fischer, single	SWN Production Company, LLC	15.00%	943286	0.00%
9)	07-00-13-0001-0009	Optima Foundation, Inc. The Sara C. Maxwell Revocable Trust, Dated 6/4/97, by Joseph F. Maxwell, Trustee	SWN Production Company, LLC SWN Production Company, LLC	15.00% 15.00%	903315 865231	0.00% 0.00%
10)	03-01-13-0001-0001	October Foundation, Inc. The Sara C. Maxwell Revocable Trust, Dated 6/4/97, by Joseph F. Maxwell, Trustee	SWN Production Company, LLC SWN Production Company, LLC	15.00% 15.00%	963313 865231	0.00% 0.00%
11)	03-01-10-00-21-0000	Robert E. Ludwig, Sr. & his Estate E. Ludwig a trustee	SWN Production Company, LLC	15.00%	1012507	0.00%
12)	04-00-13-00-28-0000	Robert E. Ludwig and Amanda T. Ludwig, husband and wife	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 15.00%	79232 883264	0.00% 0.00%
13)	04-00-13-00-25-0000	Russell F. Venturini and Sandra K. Parke, husband and wife	Fortuna Energy Inc. Range Resources Appalachia, LLC Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	12.50% 15.00% 15.00% 15.00%	789713 793694 808445 884181	0.00% 0.00% 0.00% 0.00%
14)	04-00-13-00-25-0001	Edward D. Gierper and Linda M. Gierper, husband and wife	Texas Crude Oil, LLC Midport Energy Corporation Anschutz Petroleum Partner Operating, LLC SWN Production Company, LLC	15.00% 15.00% 15.00% 15.00%	811722 808302 909275 910405	0.00% 0.00% 0.00% 0.00%
15)	04-00-13-00-16-0000	Stella R. Kropoguz, widow	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	799107 883276	0.00% 0.00%
16)	04-00-13-00-12-0001	West Barrens, Inc.	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	833707 883264	0.00% 0.00%
17)	04-00-13-00-20-0002	Joseph M. Hughes and Barb A. Hughes, husband and wife	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	818570 883494	0.00% 0.00%
18)	04-00-13-00-10-0003	W. Quinn Ford, single Mary Agnes Ford, single	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00% 15.00% 15.00%	845387 88545 845391 84545	0.00% 0.00% 0.00% 0.00%
19)	US R08717-28	West Virginia Department of Transportation, Division of Highways	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	83014 883620	0.00% 0.00%
20)	04-00-12-0010-0014	W. Gary Mall, Jr. married	Cheapeake Appalachia, L.L.C. SWN Production Company, LLC	15.00% 15.00%	799213 884226	0.00% 0.00%

END OF EXHIBIT "A"

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 Office of Oil and Gas  
 APR 20 2022  
 WV Department of  
 Environmental Protection

05/27/2022

April 11, 2022

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

**RE:** SWN's proposed New Well: OCC-A OHI 601H in Ohio County, West Virginia, Drilling under Oglebay Drive, Dement Road, Chapel Hill Road and Roney Point Run Road.

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 Oglebay Drive, Dement Road, Chapel Hill Road and Roney Point Run Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Respectfully,

**SWN Production Company, LLC**



Gavin Nadeau, RPL  
Landman

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Office of Oil and Gas

APR 20 2022

WV Department of  
Environmental Protection

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05/27/2022



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

Date of Notice Certification: 4/19

API No. 47- 009 - \_\_\_\_\_  
Operator's Well No. OCC-A OHI 601H  
Well Pad Name: OCC A OHI Pad

**Notice has been given:**

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>534266.295</u>
County:	<u>069-Ohio</u>		Northing:	<u>4436637.065</u>
District:	<u>Triadelphia</u>	Public Road Access:	<u>Rodneys Point Run</u>	
Quadrangle:	<u>Valley Grove</u>	Generally used farm name:	<u>OCC-A OHI</u>	
Watershed:	<u>Ronev Point Run of Little Wheeling Creek</u>			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY		<b>OOG OFFICE USE ONLY</b>
<input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED		<input checked="" type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)		<input type="checkbox"/> RECEIVED/ NOT REQUIRED
<input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION	RECEIVED Office of Oil and Gas	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 5. PUBLIC NOTICE	APR 20 2022	<input type="checkbox"/> RECEIVED
<input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION	WV Department of Environmental Protection	<input type="checkbox"/> RECEIVED

**Required Attachments:**

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

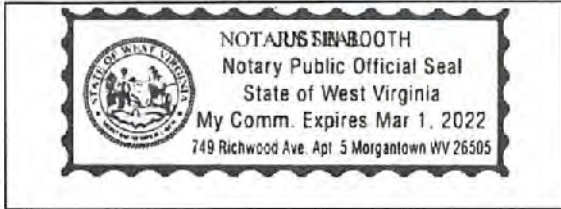
05/27/2022

**Certification of Notice is hereby given:**

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

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

*Brittany Woody*



Subscribed and sworn before me this 17th day of FEBRUARY.

*Quintin* Notary Public

My Commission Expires 3/1/2022

**Oil and Gas Privacy Notice:**

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



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**APR 20 2022**  
WV Department of  
Environmental Protection



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

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

Date of Notice: 4/19 Date Permit Application Filed: 4/19

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: Board of Commissioners Ohio County ✓  
Address: 1500 Chapline St., Suite 215  
Wheeling, WV 26003  
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(s) (Road and/or Other Disturbance)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

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

SURFACE OWNER(s) (Impoundments or Pits)  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

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APR 20 2022

WV Department of  
Environmental Protection  
05/27/2022



WW-6A  
(8-13)

APR 20 2022

WV Department of  
Environmental Protection

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**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

05/27/2022



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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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



### **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.

WW-6A  
(8-13)

API NO. 47-009 -  
OPERATOR WELL NO. OCC-A OHI 601H  
Well Pad Name: OCC A OHI Pad

**Notice is hereby given by:**

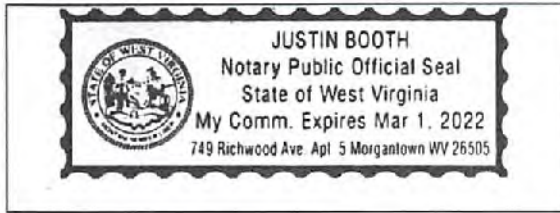
Well Operator: SWN Production Co., LLC  
Telephone: 304-684-1610  
Email: Brittany\_Woody@swn.com

*Brittany  
Woody*

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

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 17<sup>th</sup> day of FEBRUARY 2022

*Justin Booth* Notary Public

My Commission Expires 3/1/2022

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APR 20 2022  
WV Department of  
Environmental Protection

05/27/2022



Attachment 13A

OCC A OHI Pad - Water Purveyors w/in 1500'

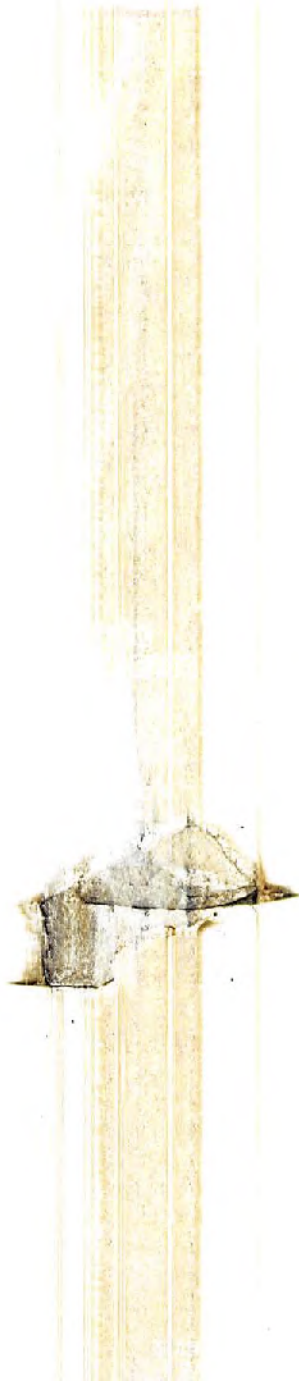
Sources

Landowner

Address

Barbara Shores

1705 Point Run Road, Triadelphia WV 26059 2 Well ✓



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

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

**Date of Notice:** 1/10/22      **Date of Planned Entry:** 1/11/22

**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: Board of Commission Ohio County  
Address: 1500 Chapline St., Suite 215  
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: Board of Commission Ohio County  
Address: 1500 Chapline St., Suite 215  
Wheeling, WV 26003

\*please attach additional forms if necessary

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**APR 20 2022**  
WV Department of  
Environmental Protection

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>40.089427, -80.600276</u>
County: <u>Ohio</u>	Public Road Access: <u>Rodneys Point Run</u>
District: <u>Liberty</u>	Watershed: <u>Upper Ohio South</u>
Quadrangle: <u>Valley Grove</u>	Generally used farm name: <u>OCC-A</u>

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

Notice is hereby given by:

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

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

**Oil and Gas Privacy Notice:**

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

05/27/2022



**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:** 02/23/2022      **Date Permit Application Filed:** 4/19

**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: Board of Commission Ohio County  
Address: 1500 Chapline St., Suite 215  
Wheeling, WV 26003

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
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**APR 20 2022**  
WV Department of  
Environmental Protection

**Notice is hereby given:**

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

State: West Virginia      UTM NAD 83      Easting: 534,266.295  
County: Ohio      Northing: 4,436,637.055  
District: Tridelpia      Public Road Access: Roney Point Run Road  
Quadrangle: Valley Grove, WV      Generally used farm name: CCC-A OHI  
Watershed: Roney Point Run of Little Wheeling Creek of Wheeling Creek

**This Notice Shall Include:**

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

**Notice is hereby given by:**

Well Operator: SWN Production Company, LLC  
Address: 1300 Fort Pierpont Drive, Suite 201  
Morgantown, WV 26508  
Telephone: 304-884-1714  
Email: Michael.Yates@swn.com  
Facsimile: \_\_\_\_\_

Authorized Representative: Mike Yates  
Address: 1300 Fort Pierpont Drive, Suite 201  
Morgantown, WV 26508  
Telephone: 304-884-1714  
Email: Michael.Yates@swn.com  
Facsimile: \_\_\_\_\_

**Oil and Gas Privacy Notice:**

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



**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:** 02/23/2022      **Date Permit Application Filed:** 4/19

**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: <u>Board of Commission Ohio County</u>	Name: _____
Address: <u>1500 Chapline St., Suite 215</u>	Address: _____
<u>Wheeling, WV 26003</u>	

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>534,266.295</u>
County: <u>Ohio</u>	Northing: <u>4,436,637.065</u>
District: <u>Tridelphia</u>	Public Road Access: <u>Roney Point Run Road</u>
Quadrangle: <u>Valley Grove, WV</u>	Generally used farm name: <u>OCC-A OHI</u>
Watershed: <u>Roney Point Run of Little Wheeling Creek of Wheeling Creek</u>	

**This Notice Shall Include:**

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

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Well Operator: <u>SWN Production Company, LLC</u>	Address: <u>1300 Fort Pierpont Drive, Suite 201</u>	<b>APR 20 2022</b>
Telephone: <u>304-864-1714</u>	<u>Morgantown, WV 26508</u>	
Email: <u>Michael.Yates@swn.com</u>	Facsimile: _____	WV Department of Environmental Protection

**Oil and Gas Privacy Notice:**

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





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

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

D. Alan Reed, P.E.  
State Highway Engineer

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

February 9, 2022

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

Subject: DOH Permit for the OCC-A Pad, Ohio County  
OCC A OHI 601H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2011-0363 which has been issued to Southwestern Energy for access to the State Road for a well site located off Ohio County Route 911 HARP MP 0.40.

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

Very Truly Yours,

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

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

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WV Department of  
Environmental Protection



## 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
EC5486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
EC5734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	6851-67-7
		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
Ecopol-FCAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
		Citric Acid	77-92-9
		Water	7732-18-5
		Proprietary	Proprietary
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, Exoxyated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FR-75 (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-propanamide	Proprietary
		Hydrotreated Distillate	64742-47-8
		Sodium Chloride	7647-14-5
		Alcohols, C12-16, Exoxyated	68551-12-2
		Oleic Acid Diethanolamide	93-83-4
		Ammonium Chloride	12125-02-9
Plexslick 958	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, Exoxyated	68551-12-2
		Water	7732-15-5
Plexslick 995	no data available	Copolymer of 2-Propanamide	*****
		Distillates (petroleum), hydrotreated light	64742-47-8
		Alcohol Ethoxylate	*****
		Surfactant	*****
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propanamide	9003-06-9
Plexald 655 NM	Scale Inhibitor	Diethylenetriamine penta (methylene phosphonic acid)	15827-30-8
Plexslick 922	no data available	Copolymer of 2-propanamide	69418-26-4
		Distillates (petroleum), hydrotreated light	64742-47-8
		Ammonium chloride ((NH4)Cl)	12125-02-9
		Oleic Acid Diethanolamide	93-83-4
Tolcide 4Frac	Mixture	Phosphonium, tetrakis (hydroxymethyl), Sulfate	55566-30-8
		Quaternary ammonium Compounds, Benzyl-C12-16-Alkyldimethyl, Chlorides	68424-85-1
		Ethanol	64-17-5
Tolcide P550A	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
		Poly (oxy 1,2 ethanediyl) alpha -tridecyl-omega -hydroxy-, branched	69011-36-5
Legend LD-7750W	Scale Control	Methanol	67-56-1
		Phosphonic Acid Salt	Proprietary
MC MX 8-4743	Specialty Product	Sodium Nitrate	7631-99-4

As of 4/1/2022

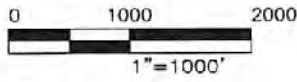
RECEIVED  
Office of Oil and Gas

APR 20 2022

WV Department of  
Environmental Protection

05/27/2022





**APPROVED**  
**WVDEP OOG**  
Modification  
9/6/2018



# OCC A OHI PAD "A" CONSTRUCTION AND RECLAMATION PLAN AS-BUILT TRIADELPHIA DISTRICT OHIO COUNTY, WV MAY 2017 REVISED JUNE 2018

- SHEET INDEX**
- TS1. TITLE SHEET
  - EP2.1 EVACUATION ROUTE/PREVAILING WIND
  - EP2.2 EVACUATION ROUTE/PREVAILING WIND
  - AS3.1 ASBUILT OVERVIEW
  - AS3.2 ASBUILT
  - AS3.3 ASBUILT
  - AS3.4 ASBUILT
  - AS3.6 ASBUILT
  - AS3.7 ASBUILT
  - AS3.8 ASBUILT
  - AS3.9 ASBUILT
  - ASR4.1 ACCESS ROAD PROFILE
  - ASR4.2 ACCESS ROAD PROFILE
  - ASR4.3 ACCESS ROAD PROFILE
  - MRD5.1 RECLAMATION PLAN OVERVIEW
  - MRD5.2 RECLAMATION PLAN
  - MRD5.3 RECLAMATION PLAN
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  - MRD5.9 RECLAMATION PLAN
  - MRD6.1 RECLAMATION DETAILS
  - MRD6.2 RECLAMATION DETAILS
  - MRD6.3 RECLAMATION DETAILS

**ORIGINAL LOD**

TOTAL DISTURBED AREA: 17.9 ACRES  
ROAD DISTURBED AREA: 5.9 ACRES  
PAD DISTURBED AREA: 9.0 ACRES

**REVISED LOD - JUNE, 2018**

TOTAL DISTURBED AREA: 18.4 ACRES  
ROAD DISTURBED AREA: 9.4 ACRES  
PAD DISTURBED AREA: 9.0 ACRES

**COORDINATES:**

**SITE ENTRANCE ( NAD83 )**  
LAT: 40.089299  
LONG: 80.600353

**CENTER OF PAD ( NAD83 )**  
LAT: 40.079288  
LONG: 80.598094

**GATHERING AREA ( NAD83 )**  
LAT: 40.089299  
LONG: 80.600353

**EXISTING WELL 3H ( NAD83 )**  
LAT: 40.079462  
LONG: 80.598107  
API NUMBER: 069-00137

**EXISTING WELL 10H ( NAD83 )**  
LAT: 40.079502  
LONG: 80.598041  
API NUMBER: 069-00096

ENGINEER'S ESTIMATE OF QUANTITIES		
WELL PAD DATA		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
24" MOUNTABLE BERM 5:1	35	LF
FILL FOR BERM 5:1	840	CF
EROSION & SEDIMENT CONTROL ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
ROCK LINED DITCH	50	LF
CLASS C RIP RAP	68	TN
OUTLET PROTECTION/ROCK APRON SUMP	2	EA
OUTLET PROTECTION/ROCK APRON SUMP ROCK: CLASS C	2.4	TN
OUTLET PROTECTION/ROCK APRON SUMP ROCK: GEOTEXTILE	3.6	SY
CUT FOR ABOVE GROUND STORAGE TANK	403	SY
FILL FOR ABOVE GROUND STORAGE TANK	403	SY
UNDERDRAIN ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
3'X3'X1' CONCRETE CATCH BASIN	1	EA

NO.	DATE	REVISION	PROJECT #	DATE
#1	6/23/17	CEP REVISIONS	16-78	2017-05-16
#2	8/1/18	ADDED TO OOG BILL ADT. REVISED LOD		
#3	8/30/18	ADDED TOPOGRAPHY AROUND AS1		



**ELK LAKE SERVICES, LLC**

280 Indian Springs Road, Suite 123  
Indiana, PA 15701  
Phoner: (724) 463-7003

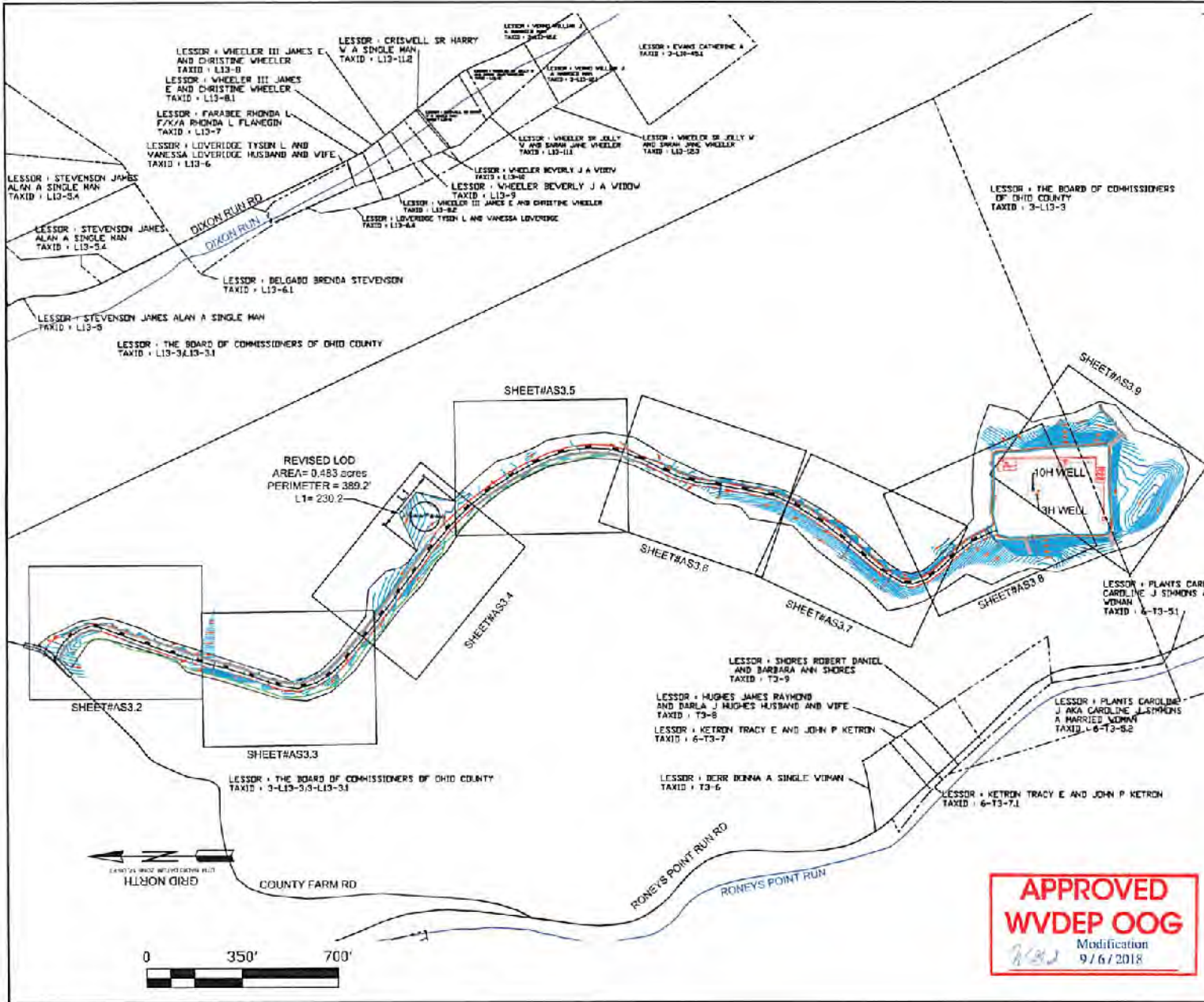


OCC A  
PAD "A"  
TRIADELPHIA DISTRICT  
OHIO COUNTY  
WEST VIRGINIA

**TITLE SHEET**

TS1





**COORDINATES:**

**SITE ENTRANCE (NAD83)**  
 LAT: 40.089299  
 LONG: 80.600353

**CENTER OF PAD (NAD83)**  
 LAT: 40.079288  
 LONG: 80.598094

**GATHERING AREA (NAD83)**  
 LAT: 40.089299  
 LONG: 80.600353

**EXISTING WELL 3H (NAD83)**  
 LAT: 40.079462  
 LONG: 80.598107  
 API NUMBER: 069-00137

**EXISTING WELL 10H (NAD83)**  
 LAT: 40.079502  
 LONG: 80.598041  
 API NUMBER: 069-00096

**CENTER OF ABOVE GROUND STORAGE TANK**  
 LAT: 40.085589  
 LONG: 80.598488

**NOTES:**

1. PROPERTY LINES PROVIDED BY GIS DATA.

**LEGEND:**

- EDGE GRAVEL
- PROPERTY LINE
- STREAM
- WETLAND
- CONTOUR MINOR ASB
- CONTOUR MAJOR ASB
- CONTOUR MINOR REC
- CONTOUR MAJOR REC
- RIP-RAP
- LIMIT OF DISTURBANCE
- CULVERT
- FENCE
- FLOOD PLAIN
- BERM

**APPROVED**  
**WVDEP OOG**  
 Modification  
 9/6/2018

NO.	DATE	BY	REVISION	
			DEF. REVISIONS	
			ADDED 20000 DIBL ANT. REVISED LOD	
			ADDED TOPOGRAPHY AND DRAINAGE	

PROJECT #	16-78
DATE	2017-05-18
DRAWN BY	NLL
CHECKED BY	KCC

<b>ELK LAKE SERVICES, LLC</b> 2800 Indian Springs Road, Suite 123 Indiana, PA 15701 Phone: (724) 463-7303	 <b>Southwestern Energy</b> Southwestern Energy Company P.O. Box 672525 Houston, TX 77267
--	---

OCC A PAD "A"	MADALINA DISTRICT SAC COLONY WEST VIRGINIA
AS-BUILT OVERVIEW	
AS.1	



NOTES:  
 1. PROPOSED AST WILL TEMPORARILY STORE FRESHWATER AND WILL HOLD A MAXIMUM OF 20,000 BARRELS (840,000 GALLONS). THE ACTUAL AST LOCATION MAY CHANGE DUE TO FIELD CONDITIONS.  
 2. LOD IS REVISED TO PROVIDE A MINIMUM OF 25' FROM THE AST TO THE LOD LIMIT.

**APPROVED WVDEP OOG**  
 Modification  
 9/6/2018

20,000 BARREL ABOVE GROUND STORAGE TANK (100' DIAMETER)  
 ELEVATION: 1152.14

CENTER OF TANK  
 LAT: 40.085589  
 LON: 80.598488

ROCK LINED CHANNEL

REVISED LOD  
 AREA= 0.483 acres  
 PERIMETER = 389.2'  
 L1= 230.2'

COORDINATES:

SITE ENTRANCE (NAD83)  
 LAT: 40.089299  
 LONG: 80.600353

CENTER OF PAD (NAD83)  
 LAT: 40.079288  
 LONG: 80.600304

GATHERING AREA (NAD83)  
 LAT: 40.089299  
 LONG: 80.600353

EXISTING WELL 3H (NAD83)  
 LAT: 40.079462  
 LONG: 80.598107  
 API NUMBER: 069-00137

EXISTING WELL 10H (NAD83)  
 LAT: 40.079502  
 LONG: 80.598041  
 API NUMBER: 069-00096

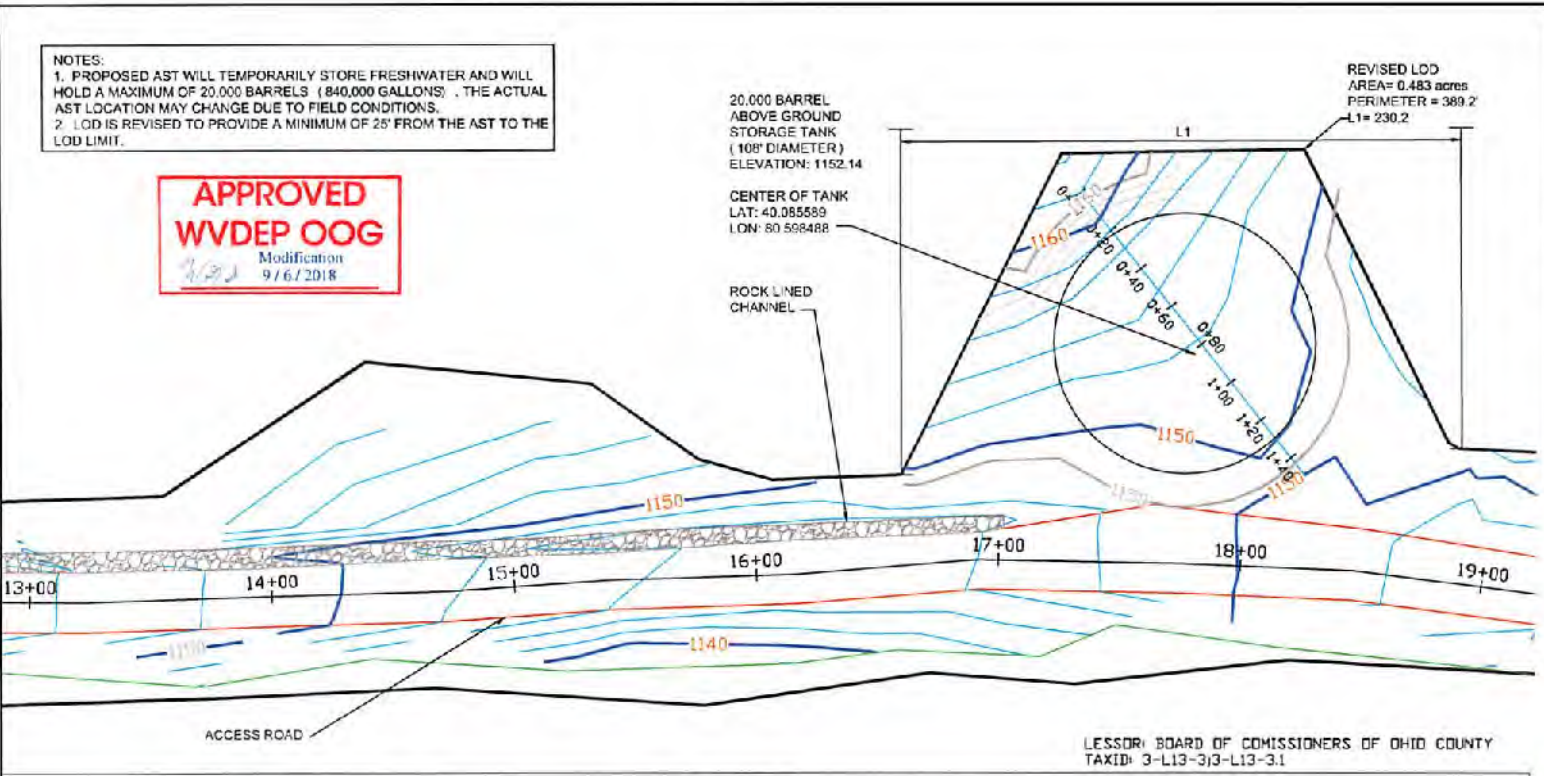
CENTER OF ABOVE GROUND STORAGE TANK  
 LAT: 40.085589  
 LONG: 80.598488

NOTES:

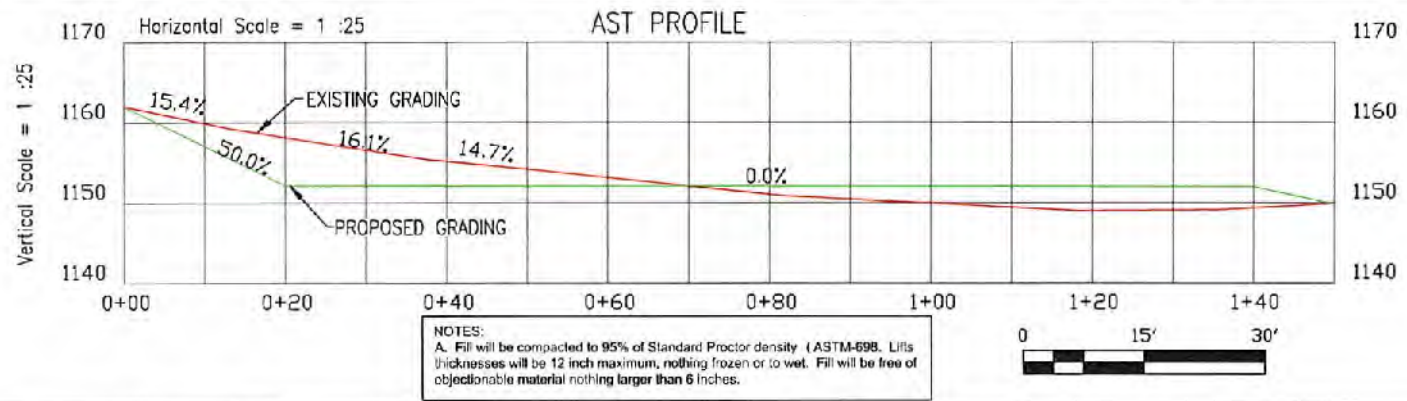
1. PROPERTY LINES PROVIDED BY GIS DATA.

LEGEND

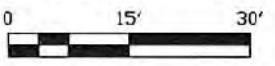
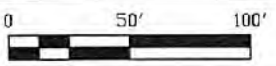
- EDGE GRAVEL
- - - PROPERTY LINE
- STREAM
- ▨ WETLAND
- CONTOUR MINOR ASB
- CONTOUR MAJOR ASB
- CONTOUR MINOR REC
- CONTOUR MAJOR REC
- ▨ RIP-RAP
- LIMIT OF DISTURBANCE
- CULVERT
- FENCE
- FLOOD PLAIN
- BERM



LESSOR: BOARD OF COMMISSIONERS OF OHIO COUNTY  
 TAXID: 3-L13-3j3-L13-3.1



NOTES:  
 A. Fill will be compacted to 95% of Standard Proctor density (ASTM-698). Lifts thicknesses will be 12 inch maximum, nothing frozen or too wet. Fill will be free of objectionable material nothing larger than 6 inches.



NO.	DATE	BY	REVISION
1	01/14/19	DEP	REVISIONS
2	05/01/19	ADD	ADDED 20,000 BARREL AST, REVISED LOD
3		ADD	ADDED TOPOGRAPHY AROUND AST

PROJECT #: 16-78  
 DATE: 2017-09-18  
 DRAWN BY: NLI  
 CHECKED BY: KCC

**ELK LAKE SERVICES, LLC**  
 280 Indian Springs Road, Suite 123  
 Indiana, PA 15701  
 Phone: (724) 463-7303

**SWN**  
 Southwestern Energy  
 Southwestern Energy Company  
 P.O. Box 672625  
 Houston, TX 77267

OCC A  
 PAD "A"  
 HARRISBURG DISTRICT  
 OHIO COUNTY  
 WEST VIRGINIA

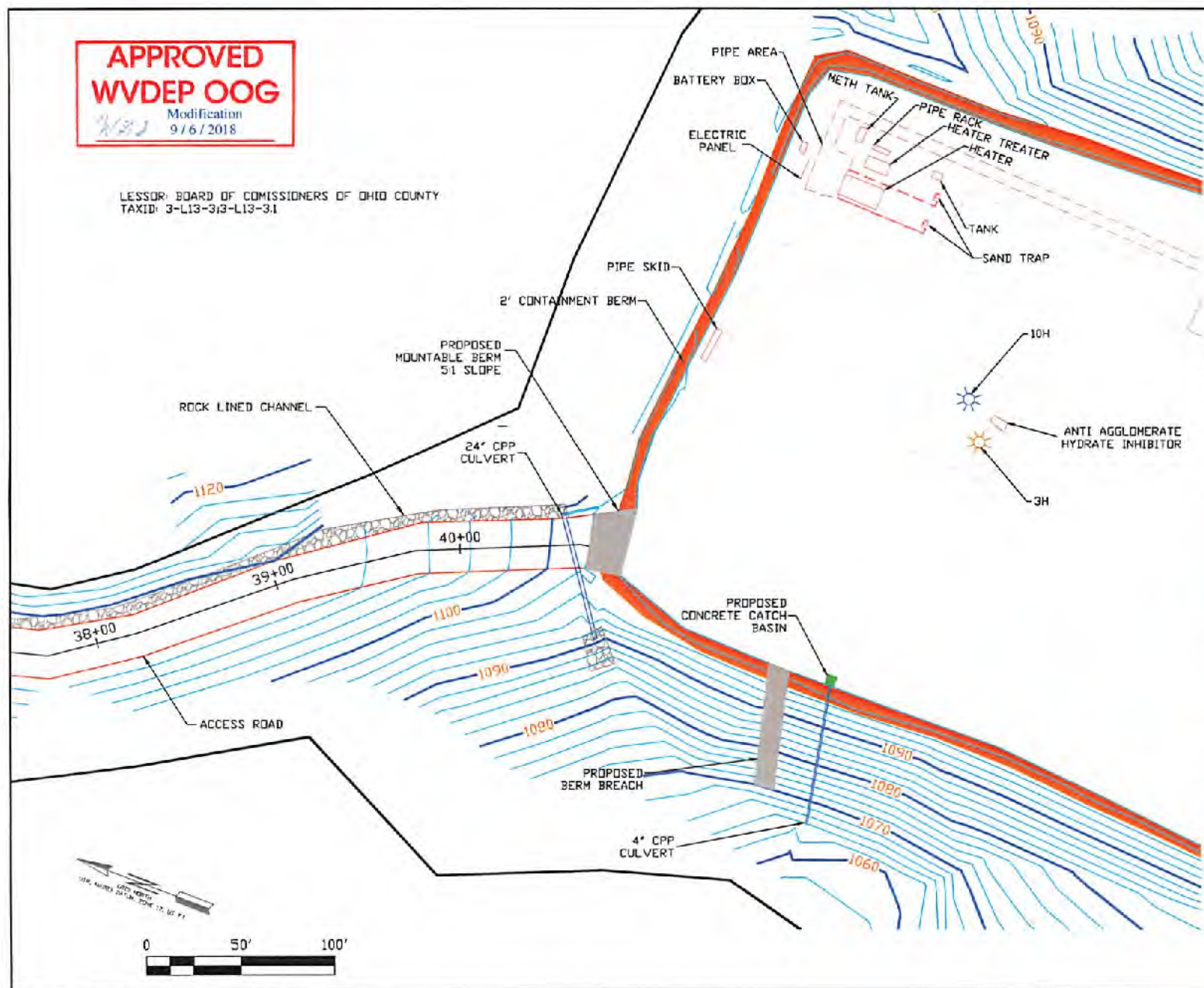
AS-BUILT

AS3.4



**APPROVED WVDEP OOG**  
 Modification  
 9/6/2018

LESSOR: BOARD OF COMMISSIONERS OF OHIO COUNTY  
 TAXID: 3-L13-3J3-L13-3.1



**COORDINATES:**

**SITE ENTRANCE (NAD83)**  
 LAT: 40.089299  
 LONG: 80.600353

**CENTER OF PAD (NAD83)**  
 LAT: 40.079288  
 LONG: 80.598094

**GATHERING AREA (NAD83)**  
 LAT: 40.089299  
 LONG: 80.600353

**EXISTING WELL 3H (NAD83)**  
 LAT: 40.079462  
 LONG: 80.598107  
 API NUMBER: 069-00137

**EXISTING WELL 10H (NAD83)**  
 LAT: 40.079502  
 LONG: 80.598041  
 API NUMBER: 069-00096

**CENTER OF ABOVE GROUND STORAGE TANK**  
 LAT: 40.085589  
 LONG: 80.598488

**NOTES:**

1. PROPERTY LINES PROVIDED BY GIS DATA.

- LEGEND**
- EDGE GRAVEL
  - PROPERTY LINE
  - STREAM
  - WETLAND
  - CONTOUR MINOR ASB
  - CONTOUR MAJOR ASB
  - CONTOUR MINOR REC
  - CONTOUR MAJOR REC
  - RIP-RAP
  - LIMIT OF DISTURBANCE
  - CULVERT
  - FENCE
  - FLOOD PLAIN
  - BERM



NO.	DATE	REVISION
#1	05/01/17	DEP REVISIONS
#2	07/14/18	ADDED 20'X80' BIL. AST. REVISED JOD
#3	08/30/18	ADDED TOPOGRAPHY AROUND AST

PROJECT # 16-78  
 DATE 2017-05-16  
 DRAWN BY NLL  
 CHECKED BY KDC



**ELK LAKE SERVICES, LLC**  
 250 Indian Springs Road, Suite 123  
 Indiana, PA 15701  
 Phone: (724) 463-7303

**SWN**  
 Southwestern Energy  
 Southwestern Energy Company  
 P.O. Box 872625  
 Houston, TX 77287

OCC A  
 PAD "A"  
 TRAZER PAA DISTRICT  
 OHIO COUNTY  
 WEST VIRGINIA

AS-BUILT

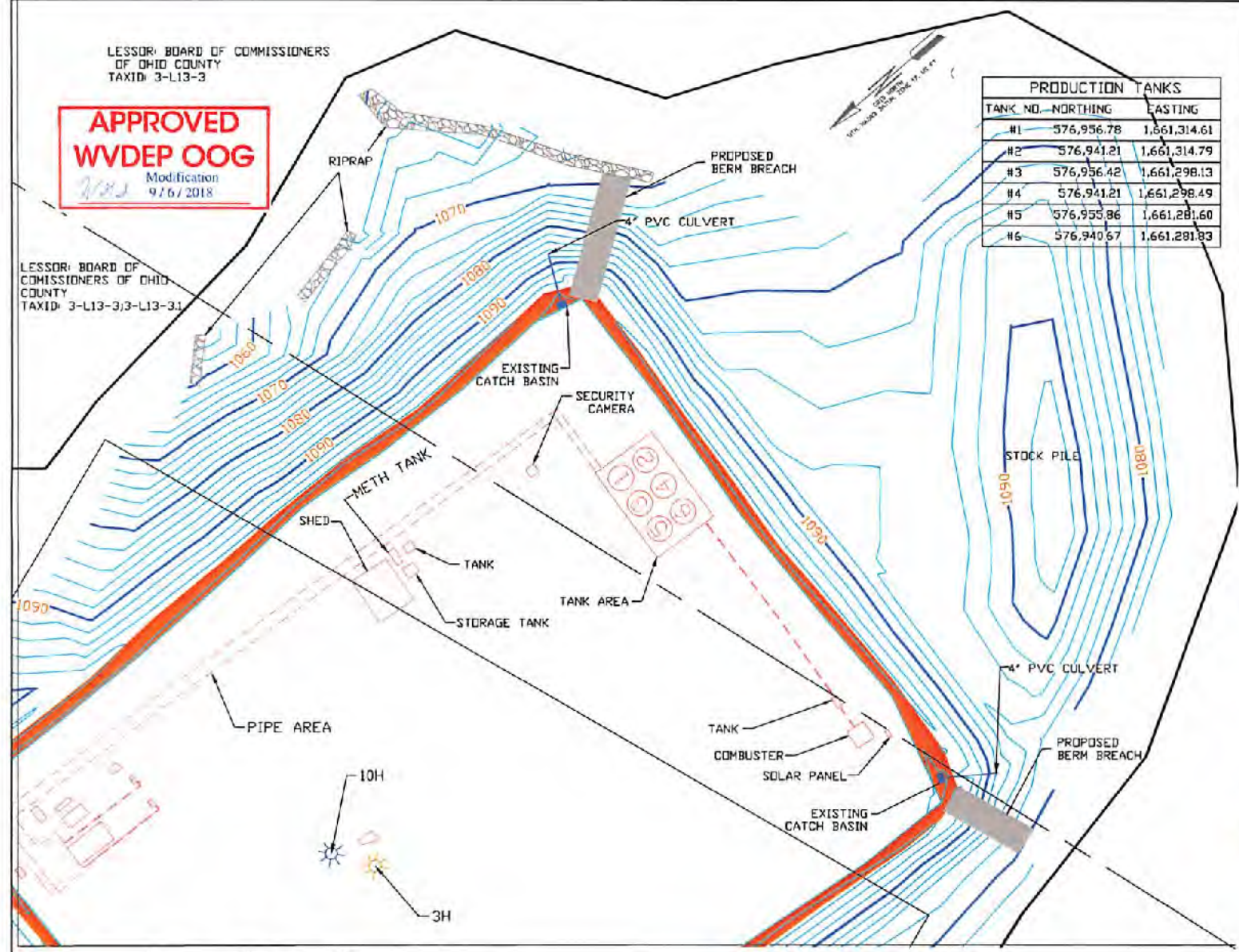
AS38



LESSOR: BOARD OF COMMISSIONERS  
OF OHIO COUNTY  
TAXID: 3-L13-3

**APPROVED**  
**WVDEP OOG**  
Modification  
9/6/2018

LESSOR: BOARD OF COMMISSIONERS OF OHIO COUNTY  
TAXID: 3-L13-3/3-L13-31



PRODUCTION TANKS		
TANK NO.	NORTHING	EASTING
#1	576,956.78	1,661,314.61
#2	576,941.21	1,661,314.79
#3	576,956.42	1,661,298.13
#4	576,941.21	1,661,298.49
#5	576,955.86	1,661,281.60
#6	576,940.67	1,661,281.83

**COORDINATES:**

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API NUMBER: 069-00137

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LAT: 40.079502  
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API NUMBER: 069-00096

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LAT: 40.085589  
LONG: 80.598488

**NOTES:**

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  - CONTOUR MAJOR ASB
  - CONTOUR MINOR REC
  - CONTOUR MAJOR REC
  - RIP-RAP
  - LIMIT OF DISTURBANCE
  - CULVERT
  - FENCE
  - FLOOD PLAIN
  - BERM

REVISION	NO.	DATE	DESCRIPTION
1	5/20/17	5/14/16	DCP REVISIONS
2	5/14/16	5/20/16	ACCED TO 3000 BBL. AST. REVISED LOD
3	5/20/16		ACCED TOPOGRAPHY AROUND AST.

PROJECT #	15-78
DATE	2017-05-16
DRAWN BY	HLL
CHECKED BY	KDC

**ELK LAKE SERVICES, LLC**  
280 Indian Springs Road, Suite 123  
Indiana, PA 15701  
Phone: (724) 463-7303

**SWN**  
Southwestern Energy  
Southwestern Energy Company  
P.O. Box 874825  
Houston, TX 77257

OCC A PAD "A"  
TRADE/PLA DISTRICT  
OHIO COUNTY  
MAP DIST. VARIOUS

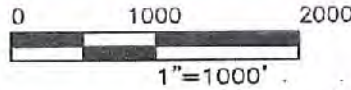
  

AS-BUILT

AS39





GRID NORTH  
NAD 83  
UTM ZONE 17N  
48E FT



# OCC A OHI PAD "A" CONSTRUCTION AND RECLAMATION PLAN AS-BUILT TRIADELPHIA DISTRICT OHIO COUNTY, WV MAY 2017

APR 20 2017  
WV Department of  
Environmental Protection

**LOD**

TOTAL DISTURBED AREA: 17.9 ACRES  
ROAD DISTURBED AREA: 2.4 ACRES  
PAD DISTURBED AREA: 3.0 ACRES

**COORDINATES:**

**SITE ENTRANCE (NAD83)**  
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API NUMBER: 068-00137

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API NUMBER: 069-00096

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- MRD6.3 RECLAMATION DETAILS

ENGINEER'S ESTIMATE OF QUANTITIES		
WELL PAD DATA		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
24" MOUNTABLE BERM 5:1	35	LF
FILL FOR BERM 5:1	840	CF
EROSION & SEDIMENT CONTROL ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
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OUTLET PROTECTION/ROCK APRON SUMP ROCK: CLASS C	2.4	TN
OUTLET PROTECTION/ROCK APRON SUMP ROCK: GEOTEXTILE	3.6	SY
UNDERDRAIN ITEMS		
DESCRIPTION	ESTIMATED QUANTITY	UNIT
3'X3'X3' CONCRETE CATCH BASIN	1	EA

NO.	DATE	REVISION

PROJECT #: 16-78  
DATE: 2017-05-16  
DRAWN BY: NLL  
CHECKED BY: MCH



**ELK LAKE SERVICES, LLC**  
280 Indian Springs Road, Suite 123  
Indiana, PA 15701  
Phone: (724) 463-7303

**SWN**  
Southwestern Energy  
Southwestern Energy Company  
P.O. Box 872625  
Houston, TX 77267

OCC A PAD "A"  
TRIADELPHIA DISTRICT  
OHIO COUNTY  
WEST VIRGINIA  
**TITLE SHEET**  
TS1

*Handwritten:* Harper J. Hunt 3/8/2017