



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, November 2, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for SANDRA PARR BRK 401H
47-009-00265-00-00

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

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

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

James A. Martin
Chief

Operator's Well Number: SANDRA PARR BRK 401H
Farm Name: ANTHONY BRUCE PARR
U.S. WELL NUMBER: 47-009-00265-00-00
Horizontal 6A New Drill
Date Issued: 11/2/2018

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: 9-00265

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.

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 009- Brooke 3- Buffalo 247- Bethany
Operator ID County District Quadrangle

2) Operator's Well Number: Sandra Parr BRK 401H Well Pad Name: Sandra Parr BRK Pad

3) Farm Name/Surface Owner: Anthony Bruce Parr, ET AL Public Road Access: Atchison Road

4) Elevation, current ground: 1276' Elevation, proposed post-construction: 1276'

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

(b) If Gas Shallow Deep _____
Horizontal _____

6) Existing Pad: Yes or No Yes

C. PLL 1-10-18

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- 6391', Target Base TVD- 6436', Anticipated Thickness- 45', Associated Pressure- 4183

8) Proposed Total Vertical Depth: 6416'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16725'

11) Proposed Horizontal Leg Length: 9572.09'

12) Approximate Fresh Water Strata Depths: 336'

13) Method to Determine Fresh Water Depths: Robert Caldwell Spring

14) Approximate Saltwater Depths: 759' TVD - Salinity Profile

15) Approximate Coal Seam Depths: 613'

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

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

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

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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	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	436'	436'	423 sx/CTS
Coal	9 5/8"	New	J-55	36#	2026'	2026'	781 sx/CTS
Intermediate	7"	New	J-55	20#	If Needed/As Needed	If Needed/As Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	16725'	16725'	Lead 914sx/Tail 2352sx/100' Inside Int
Tubing	2 3/8"	New	HCP-110	4.7#	Approx. 6416'	Approx. 6416'	
Liners							

Cable 1-10-18

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	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/50% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/50% Excess
Tubing	2 3/8"	4.778"	0.190				
Liners							

PACKERS

Kind:	10K Arrowset AS-1X			
Sizes:	5 1/2"			
Depths Set:				RECEIVED Office of Oil and Gas

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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. The well is produced through surface facilities consisting of high pressure production units, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 100 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 20.37

22) Area to be disturbed for well pad only, less access road (acres): 4.78

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Intermediate Surface	S001	accelerator	calcium chloride up to 3%	10043-52-4
	S001	accelerator	calcium chloride	10043-52-4
Kick Off Plug	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
	D801	retarder	aromatic polymer derivative	proprietary
	D047	antifoam	polypropylene glycol	25322-69-4
Production-Lead	D167	fluid loss	aliphatic amide polymer	proprietary
	D154	extender	non-crystalline silica	7631-86-9
	D400	gas migration	boric acid	10043-35-3
	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D201	retarder	chrySTALLINE silica	14808-60-7
			metal oxide	proprietary
	D202	dispersant	sulphonated synthetic polymer	proprietary
formaldehyde (impurity)			proprietary	
Production-Tail	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgate)	8031-18-3
	D167	fluid loss	aliphatic amide polymer	proprietary
			sodium polynaphthalene sulfonate	9008-63-3
	D065	dispersant	sodium sulfate	7757-82-6
			chrySTALLINE silica	14808-60-7
	D201	retarder	metal oxide	proprietary
chrySTALLINE silica			14808-60-7	

Rev. 5/18/2018

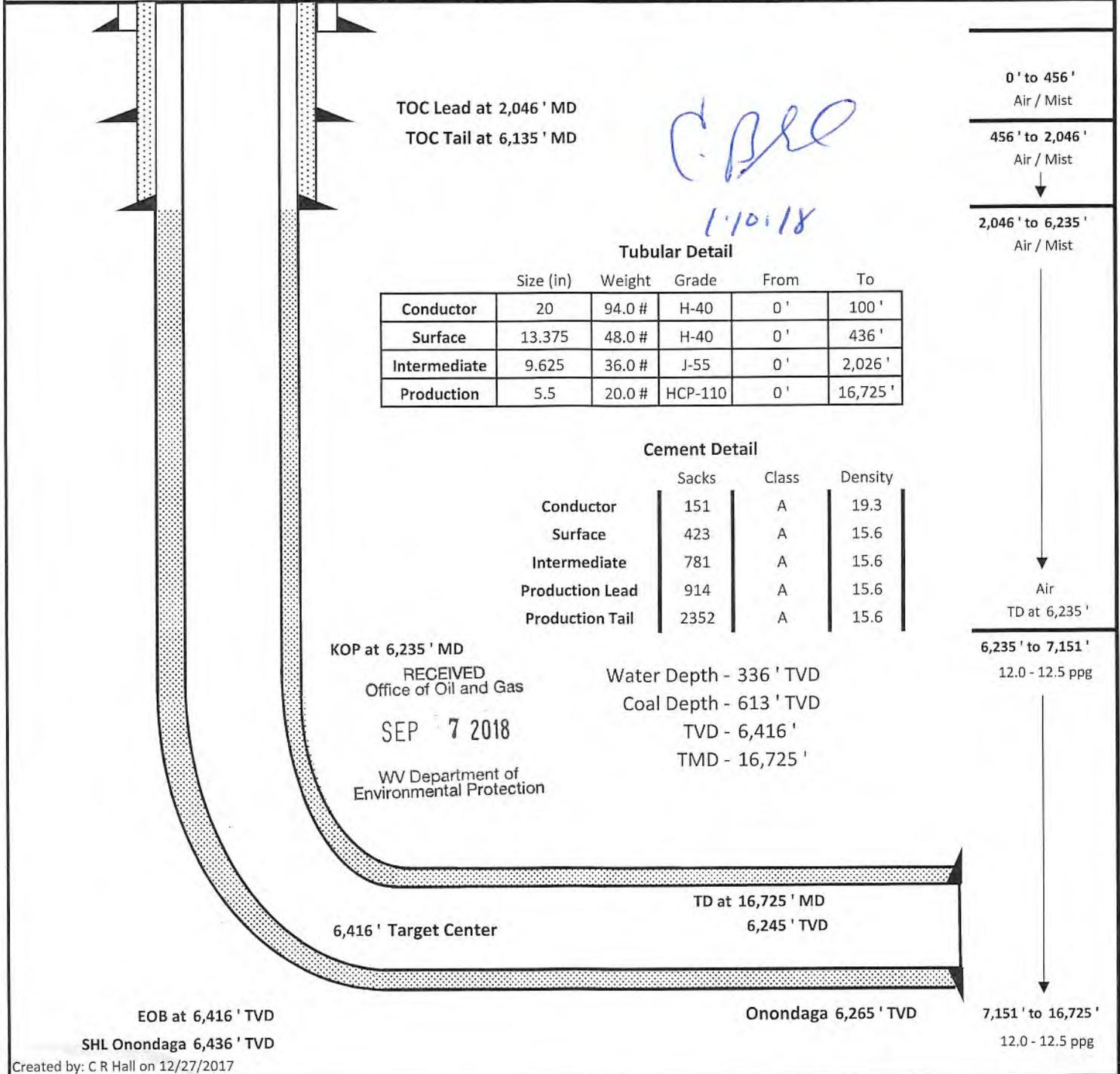
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Southwestern Energy Company	Proposed Drilling Program
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Well: SANDRA PARR BRK 401 Field: PANHANDLE FIELD \\ County: BROOKE SHL: 40.1795 Latitude -80.5216 Longitude BHL: 40.2045 Latitude -80.5391 Longitude KB Elev: 1,302 ft MSL	Re-entry Rig: TBD Prospect: PANHANDLE State: WV KB: 26 ft AGL GL Elev: 1,276 ft MSL
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Area of Review

API	Operator	Status	Latitude	Longitude	Vertical TD	Producing Formation	Producing Zones Not Perforated
4700900110	Chesapeake Appalachia, L.L.C.	Horizontal Gas and Oil	40 12' 30"	80 30' 00"	6423	Marcellus	N/A

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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) Buffalo Creek Quadrangle Bethany

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 34-155-22403, 34-099-24057, 34-119-28776, 34-167-23862, 34-155-23795, 34-121-23995, 34-155-21893)
- Reuse (at API Number _____ at next anticipated well, API# will be included with the WR-34/DDMR &/or permit addendum. _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility)

Will closed loop system be used? If so, describe: Yes

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

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

Additives to be used in drilling medium? Attachment 3A

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

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

-Landfill or offsite name/permit number? Meadowfill SWF- 1032, Short Creek SWF-1034, Carbon Limestone MSWL018781, Wetzel County 1021 Arden Landfill 10072, Apex Sanitary Landfill 06-08438, Brooke Co SWF-1013, Valley 100280

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 Regulatory Analyst

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Subscribed and sworn before me this 29 day of Aug 2018

Elizabeth Blankenship

My commission expires 6/23/2024



SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 20.37 Prevegetation pH _____

Lime as determined by pH test min. 2 Tons/acre or to correct to pH 4.78

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Attachment 3B

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

C. BLO

1-10-18

Comments: _____

Title: Oil and Gas Inspector

Date: _____

C. BLO

1-10-18

Field Reviewed? () Yes () No

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Attachment 3A

Drilling Mediums

Surface/Coal(if present)/Freshwater Intervals:

Intermediate/Coal (if present):

Air

Brine (In Gas Storage areas)

Organophilic Bentonite

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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R² → V⁺
A



WVD Seeding Specification

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

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

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%
<p>Apply @ 100lbs per acre April 16th- Oct. 14th</p>	
<p>Organic Fertilizer @ 200lbs per Acre</p>	
<p>Apply @ 200lbs per acre Oct. 15th- April 15th</p>	
<p>Pelletized Lime @ 2 Tons per Acre</p>	

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%
<p>Apply @ 25lbs per acre April 16th- Oct. 14th</p>	
<p>Apply @ 50lbs per acre Oct. 15th- April 15th</p>	
<p>NO FERTILIZER OR LIME INSIDE WETLAND LIMITS</p>	

4700 00265

MARCELLUS WELL DRILLING PROCEDURES AND WELL SITE SAFETY PLAN



SWN Production Company, LLC
179 Innovation Drive
Jane Lew, West Virginia 26378

API NO. 47-XXX-XXXXX
WELL NAME: Sandra Parr BRK 401H
Bethany QUAD
Buffalo DISTRICT
Brooke COUNTY, WEST VIRGINIA

Submitted by:

Brittany Woody *Brittany Woody* Date: 12/27/2017

Title: Regulatory Analyst SWN Production Co., LLC

Approved by:

[Signature] Date: 1-10-18

Title: Oil & Gas Inspector

Approved by:

_____ Date: _____

Title: _____

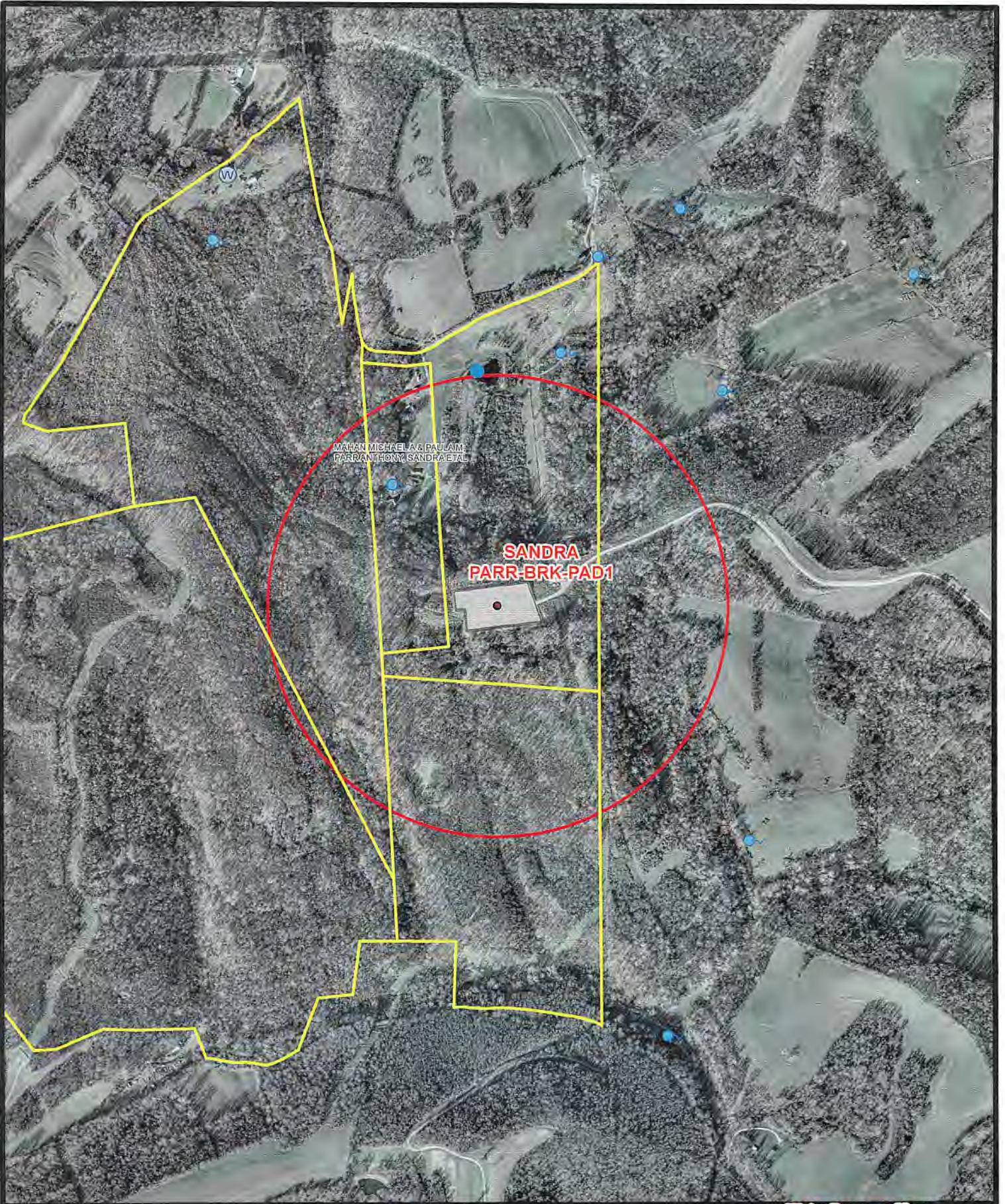
SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

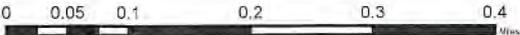
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 1 in = 833 ft


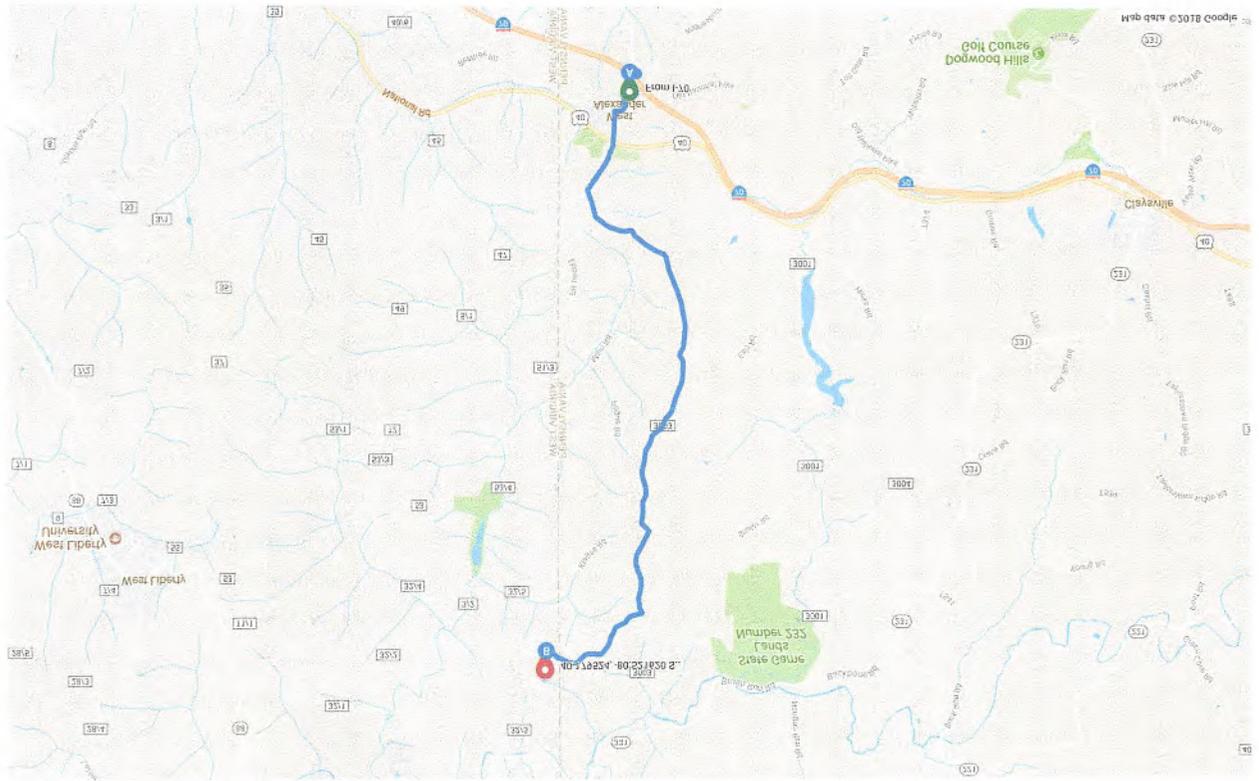
Coordinate System: NAD 1983 UTM Zone 17N
Units: Meter

-  Spring
-  Water Well
-  Pond
-  1500' Buffer

Water Purveyor Map
 Well Pad: Sandra Parr
 County: BRK




Date: 11/17/2017 | Author: willisb



-  **Take exit 1 toward W Alexander**
1,132 ft
-  **Turn right onto Old Brick Rd**
1,227 ft
- Continue onto Maple Ave**
699 ft
-  **Turn left onto Main St**
689 ft
-  **Turn right onto N Liberty Rd**
0.826 mi
-  **Turn right onto Dry Ridge Rd**
4.74 mi
-  **Turn left**
1.19 mi

9-00205

WW-6A1
(5/13)

Operator's Well No. Sandra Parr BRK 401H

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
See Attached Exhibit "A"				

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

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

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

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

Well Operator: SWN Production Company, L.L.C.
By: 
Its: Staff Landman

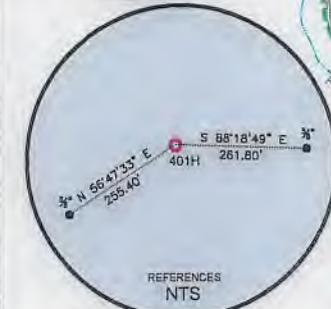
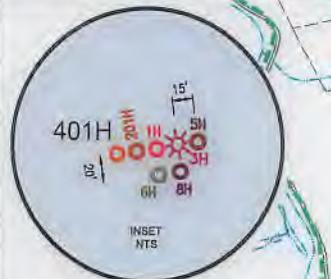
Latitude: 40°12'30" SURFACE HOLE 6043'

Latitude: 40°12'30" BOTTOM HOLE 10928'



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
800 MARKETPLACE AVENUE, SUITE 200
BRIDGEPORT, WV 26330
304-933-3119

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,447,793.450
EASTING: 540,726.840
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,447,763.083
EASTING: 540,072.799
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,450,553.041
EASTING: 539,223.039



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 969 FEET OF PROPOSED WELL.
4. PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 800 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. 991



COMPANY: SWN Production Company, LLC

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

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

SANDRA PARR BRK
OPERATOR'S WELL #: 401H
API WELL #: 47 STATE 009 COUNTY 00265 PERMIT

WELL TYPE: OIL [] WASTE DISPOSAL [] PRODUCTION [x] DEEP [] GAS [x] LIQUID INJECTION [] STORAGE [] SHALLOW [x]
WATERSHED: BUFFALO CREEK ELEVATION: 1276.2' Staked
DISTRICT: BUFFALO DISTRICT COUNTY: BROOKE QUADRANGLE: BETHANY
SURFACE OWNER: ANTHONY BRUCE PARR, ET AL ACREAGE: 132.00±
OIL & GAS ROYALTY OWNER: JOHN L. AND ANGELA LATIMER, HUSBAND AND WIFE, AND DEBORAH S. STARR, SINGLE ACREAGE: 132.00±
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: 6,416 TVD 16,725 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

Table with 2 columns: LEGEND and REVISIONS. Legend includes Proposed Surface Hole, Existing Wellhead, LPL, Existing Water Well, Existing Spring, Surveyed Boundary, Drilling Unit, Lease Boundary, Proposed Path. Revisions table includes Date: 8-21-2018, Drawn by: K.E.S., Scale: 1" = 2000', Drawing No: 172-289, Well Location Plat.



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 600 MARKETPLACE AVENUE, SUITE 200
 BRIDGEPORT, WV 26330
 304-933-3119

WELL BORE TABLE FOR SURFACE OWNERS			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	ANTHONY BRUCE PARR, SANDRA L. PARR, RAYMOND LEE, NANCY J. PARR, MICHAEL MAHAN AND PAULA MAHAN (S)	03-B49-0005	132.26
	JOHN L. AND ANGELA LATIMER, HUSBAND AND WIFE AND DEBORHA S. STARR (R)	03-B49-0005	132.26
2	ANTHONY PARR, SANDRA PARR, RAYMOND PARR, NANCY PARR, LEONARD BOYCE AND KAREN BOYCE	03-B49-0004	20.00
3	WARREN JAMES AND PATRICIA MCKEEN	03-B49-0003	110.00
4	W VA DEPT OF NATURAL RESOURCES	03-B49-0007	209.48
5	WEST VIRGINIA BUREAU OF	03-B49-0001	15.07
6	CLIFFORD E. COUNSELLMAN	03-B49-0002	80.10
7	BETHANY COLLEGE	03-B44-0014	171.67
8	GENE CHARLES VALENTINE TRUST	03-B43-0028	478.439

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	VALENTINE GENE CHARLES TRUST	03-B43-0028	38.94
B	MAIN MORRIS G.	03-B44-0010	0.67
C	MAIN MORRIS G.	03-B44-0009	0.73
D	MAIN MORRIS G.	03-B43-0008	0.72
E	NEEL CURTIS LEE & LOUANN L.	03-B44-0007	5.16
F	MAIN MILDRED	03-B44-0006	9.41
G	CHARLES TOWARD JR. AND JAYME L. DEVOS	03-B44-0012	11.00
H	LELAND MACKAY	03-B44-0014.1	7.33
I	ANTHONY BRUCE PARR, SANDRA L. PARR, RAYMOND LEE, NANCY J. PARR, MICHAEL MAHAN AND PAULA MAHAN	024-00-00-0007	49.00
J	CHARLES N. MUSTAHIO	03-B49-0011	114.02
K	JONES PERRY J. & KAREN J.	03-B49-0009	2.55
L	JONES ROBERT E.	03-B49-0012	102.01
M	JONES PERRY J. & KAREN J.	03-B49-0009	2.55
N	YOUNG ROBERT L.	03-B49-0008.1	26.37
O	YOUNG ROBERT L.	03-B49-0008	26.37
P	WALDEN DANIEL E. & MARY VIRGINIA	03-B48-0037	2.13
Q	WALDEN DANIEL E.	03-B49-0006	1.69
R	MCNICHOLAS JOHN WALTER III	03-B48-0036	8.02
S	CLIFFORD E. COUNSELLMAN	03-B44-0013	12.59
T	DONNI SAMUEL J. & MELANE	03-B43-0057	20.79
U	BETHANY COLLEGE	03-B38-0031	93.00
V		03-B43-0049	
W	COLLINS RANDY L. & VANESSA J.	03-B43-0049.2	140.98
X	BETHANY COLLEGE	03-B38-0031	93.00
Y	ROBERT CLYDE B.	03-B43-0029	0.35

47-009-00265H6A

REVISIONS:	COMPANY:		
	OPERATOR'S	SANDRA PARR BRK	
	WELL #:	401H	
	DISTRICT:	COUNTY:	STATE:
	BUFFALO DISTRICT	BROOKE	WV
			DATE: 8-21-2018
			DRAWN BY: K.E.S.
			SCALE: N/A
			DRAWING NO: 172-289
			WELL LOCATION PLAT 2

EXHIBIT "A"

Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WW-6A1, by SWN Production Company, LLC., Operator
 Sandra Parr BRK 401H
 Brooke County, West Virginia

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9-00265

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#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG
1)	03-B49-0005-0000	John L. Latimer and Angela Latimer and Deborah S. Starr	Phillips Production Company Great Lakes Energy Partners, LLC Range Resources - Appalachia, L.L.C. Chesapeake Appalachia, L.L.C. SWN Production Company, L.L.C.	18.00%	9/85 9/395 20/733 10/552 30/480
2)	03-B49-0004-0000	John L. Latimer and Angela Latimer and Deborah S. Starr	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	16/605 30/480
3)	03-B49-0003-0000	Warren James McKeen and Patricia C. McKeen	SWN Production Company, LLC	18.00%	39/209
4)	03-B49-0007-0000	The State of West Virginia, for the use and benefit of the Department of Natural Resources	SWN Production Company, LLC	20.00%	Attached
5)	03-B49-0001-0000	The State of West Virginia, for the use and benefit of the Department of Natural Resources	SWN Production Company, LLC	20.00%	Attached
6)	03-B44-0002-0000	Clifford E. Counselman	SWN Production Company, LLC	18.00%	39/206
7)	03-B44-0014-0000	Bethany College, a Corporation, fka The Trustee of Bethany College	Chesapeake Appalachia, L.L.C. SWN Production Company, LLC	18.00%	15/239 30/480
8)	03-B43-0028-0000	Bounty Minerals, LLC Bounty Minerals, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 18.00%	27/55 30/480 42/404

9-00265

Tract No.
Sale
Lease No.

CASTLEMAN RUN LAKE WMA
SWN PRODUCTION - 281.71 ACRES

OG-18-1/05-1895

THE STATE OF WEST VIRGINIA OIL AND GAS LEASE
NO SURFACE USE
(4 YEAR PAID-UP LEASE)

This Oil and Gas Lease (this "Lease") is dated and effective as of Sept 4, 2018, (the "Effective Date"), by and between the WEST VIRGINIA DIVISION OF NATURAL RESOURCES, a division of the West Virginia Department of Commerce, whose address is 324 Fourth Avenue, South Charleston, West Virginia 25303, party of the first part, hereinafter designated as "Lessor," and SWN Production Company, LLC, a Texas limited liability company, whose address is 10000 Energy Drive, Spring, Texas 77389-4954, party of the second part, hereinafter designated as "Lessee."

UNDER AND PURSUANT TO THE PROVISIONS OF THE CONSTITUTION AND LAWS OF THE STATE OF WEST VIRGINIA RELATING TO LEASING PUBLIC LANDS BELONGING TO THE STATE OF WEST VIRGINIA, WITNESSETH:

1. **Grant of Lease.** In consideration of the bonus of Five Thousand Five Hundred Thirty One Dollars (\$5,531.00) per acre, which shall be due and paid-in-full to Lessor upon the execution of this Lease; the royalties to be paid as required by this Lease; and the covenants, obligations, stipulations and conditions as set forth herein, Lessor does hereby demise, lease and let unto the Lessee the following described tracts of land for the sole purpose and with the exclusive right of exploring, drilling, completing, operating for, and producing oil, gas, and other liquid or gaseous hydrocarbons (including, by way of example and not limitation, any and all natural gas liquids such as butane, ethane, isobutane, natural gasolines, pentanes, propane, and similar liquids or byproducts) produced in association with the oil or gas in or underlying the Leased Premises (the "Granted Minerals"), situated in Brooke County, West Virginia, and being more particularly described as follows:

LEGAL DESCRIPTION

The referenced minerals underlay two certain tracts located in Buffalo District, Brooke County, West Virginia, within Castleman Run Wildlife Management Area as identified on the attached map and further described as follows:

71.71 acre Tract (Tax Map 03-0B49-0001-0000):

Being a 71.71 acre portion, more or less, of a one hundred thirteen acre tract described at Deed Book 272, page 263, in the office of the Clerk of the County Court of Brooke County, West Virginia, and being the same as follows:

Beginning at a Stone in Ellis C. Jones line and corner to land this day conveyed by said Abraham Jones to said G. Washington Jones,
Thence with said E. C. Jones lines S 19 degrees E 26 1/2 poles to a Stone
Thence N 51 3/4 degrees E 18 4/10 poles to a White Walnut,

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Thence S 41 ½ degrees E 31 8/10 poles to a Stone,
 Thence S 10 ½ degrees E 9 7/10 poles to a Stone,
 Thence N 81 ¼ degrees E 55 poles to a White Oak,
 Thence S 6 ¾ degrees E 33 ½ poles to a White Oak in line of William Rodgers,
 Thence with his lines S 76 ¾ degrees W 72 poles to a stone between a Black Oak and Birch,
 Thence S 19 degrees E 71 4/10 poles to a Hickory,
 Thence S 39 degrees W 18 3/10 poles to a stone near a Dogwood,
 Thence N 89 degrees W 66 3/10 poles to a Stone,
 Thence N 24 degrees W 94 ½ poles to a stone, formerly a walnut Corner to Charles Jones,
 Thence with his line S 58 ½ degrees W 39 8/10 poles to a stone,
 Thence with Elizabeth Stewart's line N 1 degree E 21 6/10 poles to a Stone,
 Thence with the lines of the tract this day conveyed (96 a) by said Abraham Jones to George Washington Jones N 48 ¾ degrees E 21 8/10 poles to a small Buckeye on the East Side of Castleman's Run
 Thence down the Run N 41 ½ degrees W 22 poles to a Small leaning White Oak,
 Thence N 23 ½ degrees E 34 9/10 poles to a stone,
 Thence N 76 ½ degrees E 74 8/10 poles to the place of beginning, containing 113 acres, more or less.

Said 113 acre tract is described in a deed dated March 15, 1854, by G. Washington Jones and Eliza Jones, his wife, unto Abraham Jones, of record in the Office of the Clerk of the Brooke County Commission in Deed Book 18, at page 151. By deed dated June 11, 1947, of record in said Clerk's Office in Deed Book 92, at page 124, D. Roy Jones and Martha Jones, his wife, conveyed a portion of the aforesaid 113 acre tract, comprising forty-one and 29/100 (41.29) acres, unto George Jones, described as follows:

Beginning at a stone in William Counselman's line and a corner to other lands of George A. Jones; thence with William Counselman's line, S 19 degrees 00' E 437.25 feet to a stone, a corner to lands of William Counselman and a corner to other lands of the grantors; thence with other lands of the grantors, S 15 degrees 7 minutes 14 seconds West 743.66 feet to a stake; thence again with other lands of the grantors, S 50 degrees 12 minutes 10 seconds West 936 feet to a stone in Elmer Jones' line and a corner to other lands of the grantors; thence with Elmer Jones' line N 20 degrees West 411 feet to a stone; thence again with Elmer Jones' line S 58 degrees 30 minutes W 656.7 feet to a stone, a corner to lands of Elmer Jones and a corner to other lands of the grantors; thence with other lands of the grantors, N 1 degree E 356.4 feet to a stone, corner to other lands of the grantor and a corner to other lands of George A. Jones; thence with the following courses and distances, all of which are boundaries of other lands of George A. Jones: N 48 degrees 45 minutes E 359.7 feet to a buckeye on the East side of Castleman's Run; thence down the run, N 41 degrees 30 minutes W 363 feet to a point, formerly a small leaning white oak; thence N 23 degrees 30 minutes E 575.85 feet to a stone; thence N 76 degrees 30 minutes E 1234.2 feet to the place of beginning, containing 41.29 acres.

The sale of the 41.29 acre portion of the said 113 acre tract left a residue tract comprising 71.71 acres, which is the subject of this conveyance.

210.00 acre Tract (Tax Map 03-0B49-0007-0000):

Beginning for the same at the northeast corner at a white oak and sugar tree on a ridge, thence S. 29 degrees E. 160 poles to a fallen black oak east side of run, thence S. ½ degree E. 45.2 poles to three walnut bushes, thence West 5.5 poles to a hickory, thence S. 10 ¼ degrees W. 20 poles to a stake, thence S. 86 degrees W. 14.7 poles to a gum, thence S. 31 degrees W. 20.6 poles to a beech, thence S. 68 degrees W. 16 poles to a maple, thence N. 51 ½ degrees W. 8.8 poles to a

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white oak stump, thence N. 80 degrees W. 18.3 poles to a white oak stump thence N. 50 degrees W. 9.7 poles to a sugar stump, thence N. 87 degrees W. 37 poles to a stone, thence S. 62 1/2 degrees W. 21.1 poles, thence S. 89 degrees W. 7.7 poles to a black oak, thence N. 34 degrees W. 27.7 poles to a white oak, thence N. 22 degrees W. 10.8 poles to a white oak, thence S. 43 degrees W. 23.2 poles to a small walnut, thence N. 16 1/2 degrees W. 21.8 poles to a locust, thence N. 47 1/2 degrees W. 57.7 poles to a sycamore, thence N. 28 degrees W. 26.8 poles to a sycamore, thence N. 42 degrees W. 18.2 poles to a stake near a sycamore, thence N. 33 1/2 degrees E. 32 poles to a blocked white oak, thence S. 20 degrees E. 21.8 poles to a stone, thence S. 88 degrees E. 66 poles to a stone, thence N. 37 1/4 degrees E. 18 poles to a hickory, thence N. 19 1/2 degrees W. 71.8 poles to a black oak on a steep bank, thence N. 77 1/2 degrees E. 97.7 poles to a white oak and sugar, the place of beginning, contain 210 acres and 17 perches, more or less.

There is excepted herefrom, however, all the Pittsburgh No. eight Vein of coal within and underlying the said tract of land, together with the mining rights and privileges in reference thereto, acquired by John A. Bell by two deeds, one from William C. McWreath and others bearing date the 20th day of December, 1920, and recorded in the office aforesaid in Deed Book No. 50, page 222, and the other from Della F. Lazear and Campbell Lazear, her husband, bearing the same date and recorded in the office aforesaid in Deed Book No. 50, page 226; to which deeds reference is hereby made.

Being the same property which was conveyed to Edna Grace Shafer, by virtue of a Deed of William C. McWreath, et al, dated the 28th day of July, 1941, and recorded the 16th day of August, 1941, in Deed Book 74, page 201, in the office of the Clerk of the County Court of Brooke County, West Virginia.

2. Limitations on the Grant of Lease.

- a. **Surface Activities Prohibited.** This lease does not include, and specifically prohibits and excludes the right to enter upon or conduct exploration for, drilling, and production and marketing activities of any kind associated with the Granted Minerals, or any other activities by Lessee, its representatives, employees, contractors, agents, and affiliates, on the surface of the lands covered herein, if any, including, but not limited to the construction of any pits and/or pipelines or gathering lines on the Leased Premises.
- b. **No Storage.** Lessee may not use the Leased Premises, or any part thereof, for gas, oil, hydrocarbons, or brine storage purposes.
- c. **Use of Surface or Subsurface Water.** Lessee shall not use the surface waters or the groundwaters located within the Leased Premises.
- d. **Reserved Rights of Lessor.** Lessor reserves all rights not granted in this Lease, and specifically excepts herefrom all minerals other than the Granted Minerals including, by way of example and not limitation, geothermal energy, salt, brine, coal and coalbed methane.

3. Facilities Development. All development and production activities and facilities shall be constructed on adjoining and/or other lands, but not the Leased Premises.

4. Term. This Lease shall remain in force for a term of Four (4) years from the date hereof ("Primary Term"), and as long thereafter as Granted Minerals are produced from the Leased Premises or on acreage pooled therewith, or drilling operations are continued as hereinafter

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provided. If, at the expiration of the Primary Term of this Lease, Granted Minerals are not being produced on the Leased Premises or on acreage pooled therewith, but Lessee is then engaged in drilling or re-working operations thereon, then this Lease shall continue in force for so long as operations are being continuously prosecuted on the Leased Premises or on acreage pooled therewith ("Operations"). Operations shall be considered to be continuously prosecuted if not more than one hundred twenty (120) consecutive days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well. If after discovery of Granted Minerals on the Leased Premises or on acreage pooled therewith, the production thereof should cease from any cause after the Primary Term, this Lease shall not terminate if Lessee commences additional drilling or re-working operations within one hundred twenty (120) days from date of cessation of production or from date of completion of a dry hole. If Granted Minerals shall be discovered and produced as a result of such operations at or after the expiration of the Primary Term of this Lease, this Lease shall continue in force so long as Granted Minerals are produced from the Leased Premises or on acreage pooled therewith.

5. **Unitization.** Lessee may voluntarily pool, consolidate, or unitize portions of the Leased Premises as to hydrocarbon bearing geologic formations in order to constitute a unit for the purpose of exploring for and producing Granted Minerals. Said unit may not exceed Six Hundred Forty (640) acres and shall be comprised of lands contiguous to the Leased Premises and/or in the immediate vicinity of the Leased Premises; provided, that the unit may, with the written consent of Lessor, be larger, but no greater than One Thousand, Two Hundred and Eighty (1,280) acres, which consent shall not be unreasonably withheld, if that unit, in comparison to a unit of Six Hundred Forty (640) acres, shall provide for the greater development of Granted Minerals in compliance with the diligent development and protection from drainage requirements of Paragraph Fourteen of this Lease. Once formed, the unit(s) may not be reformed, re-pooled, altered, amended, or changed in any manner without the prior written consent of Lessor, which consent shall not be unreasonably withheld.
6. **Pugh Clause – Horizontal and Vertical.** As to any acreage of the Leased Premises which is not included within any properly constituted and publicly recorded production unit at the expiration of the Primary Term, as extended hereunder, this Lease shall automatically terminate, and be of no further force or effect. Further, and to the extent Lessee has established production in paying quantities beyond the expiration of the Primary Term on the Leased Premises, or lands pooled therewith, the Lease shall terminate, on a production unit-by-production unit basis, as to all depths, horizons and zones lying at least One Hundred feet (100') below the deepest producing horizon on the Leased Premises or any lands pooled therewith determined by reference to the deepest producing horizon in each respective production unit. Thereafter, this Lease shall continue in full force and effect for all depths, horizons and zones lying above the depth of One Hundred feet (100') below the deepest producing formation of a particular production unit as to all acreage located within that particular production unit. Upon the drilling and completion of a well within a production unit containing at least a portion of the Leased Premises, Lessee shall file a declaration of pooling and unitization within a reasonable time in the records of the Office of the Clerk of the County Commission of the county in which the applicable Granted Minerals are situated.
7. **Royalty.**
 - a. **Delivery and Payment.** Lessee shall deliver or cause to be delivered to the Lessor, or its successors, nominees, agents, or assigns, at no cost to Lessor, a royalty equal to **Twenty Percent (20%) or One-Fifth of Eight-Eighths (1/5 of 8/8ths)** of the Gross Proceeds realized by Lessee, or any Affiliate of Lessee, from the sale of the Granted

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Minerals, produced and sold from the Leased Premises.

- i. **Gross Proceeds.** Gross Proceeds means the total monies and other consideration accruing to Lessee for the disposition of the Granted Minerals and/or any other marketable by-products, including condensate, produced from the Leased Premises. Gross Proceeds shall be calculated based on the total gross volume of Granted Minerals produced and sold, exclusive of production and post-production costs and severance taxes or other taxes of any nature.
 - ii. **Affiliate of Lessee.** Affiliate of Lessee means any person, corporation, firm, or other entity in which Lessee, or any parent company, subsidiary or affiliate of Lessee, owns an interest of Five Percent (5%) or more, whether by stock ownership or otherwise, or over which Lessee, or any parent company or affiliate of Lessee exercises any degree of control, directly or indirectly, by ownership, interlocking directorate, or in any other manner; and any corporation, firm or other entity which owns any interest in Lessee, whether by stock ownership or otherwise, or which exercises any degree of control, directly or indirectly, over Lessee, by stock ownership, interlocking directorate, or in any other manner.
- b. **Due Dates of Royalty.** Lessee shall pay Lessor all royalties that become due under this Lease within one hundred eighty (180) days after the first day of the month following the month during which any well commences production into a pipeline for sale of such production. Thereafter, all royalties shall be paid to Lessor on or before the last day of the third month following the month of production or within Ninety (90) days after the first day of the month following, whichever is longer.
 - c. **Interest Payable on Past Due Royalty or Other Payments.** Unless otherwise provided herein, any royalty or other payment provided for in this Lease that is not paid on or before the due date as set forth herein shall accrue interest at the prime interest rate, plus fifty (50) basis points, from the due date until paid; provided, however, that in no event shall interest be due on disputed royalties or other payments should it be determined that Lessee is not in default hereunder.
 - d. **Prime Interest Rate.** For the purpose of the immediately preceding section c of this Lease, the prime interest rate shall be the highest prime rate of interest published in the Money Rates section of the eastern edition of the Wall Street Journal (WSJ) on the date such interest shall begin to accrue or, if the WSJ is not published on the date such interest shall begin to accrue, the prime interest rate shall be the prime interest rate published in the WSJ on the nearest-preceding date on which the WSJ is published. Should the prime interest rate established by the WSJ shall no longer be available, due to either the nonexistence of the WSJ or the WSJ's failure to publish a prime interest rate, then the prime interest rate as provided herein shall be the highest prime interest rate published by a National Bank selected by Lessor, in any case not to exceed the maximum rate permitted by law.
 - e. **Termination for Non-Payment of Royalty.** If any royalty is not paid within the time prescribed in the preceding sub-section entitled Due Dates of Royalty, Lessor will provide Lessee written notice of nonpayment of royalty in accordance with paragraph 32 of this Lease. If Lessee fails to pay Lessor all royalties and interest actually due and owing to Lessor within Thirty (30) days after Lessee's receipt of such notice, Lessor may terminate this Lease upon consideration of its own interests and will not be required to consider the effect of such termination on Lessee.

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- f. **Production & Post-Production Costs.** Neither Lessee, nor any Affiliate of Lessee, may reduce Lessor's royalty for any post-production expense, including, by way of example and not limitation, pipelines, surface facilities, telemetry, gathering, dehydration, transportation, fractionation, compression, manufacturing, processing, treating, or marketing of the Granted Minerals or any severance or other taxes of any nature paid on the production thereof. Royalties under this Lease shall be based on the total proceeds of sale of the Granted Minerals, exclusive of any and all production and/or post-production costs.
8. **Method of Payment.** All rents, royalties, bonuses, or other payments accruing and/or owing from Lessee to Lessor under this Lease shall be made or tendered in the following manner:
- By certified, cashier, or company check delivered in accordance with paragraph 32 of this Lease, or
 - By direct deposit or wire transfer to the credit of Lessor as provided in writing by Lessor to Lessee.
9. **Information, Metering, Lessor's Right to Audit.** Upon request, Lessee shall furnish to Lessor copies of title opinions regarding the Leased Premises, which opinions may be redacted to preserve the confidentiality of information that is not related to Lessor's interest in the Leased Premises; copies of filings made by Lessee with the West Virginia Department of Environmental Protection related to the Leased Premises; copies of daily drilling reports, gauge tickets, sales receipts, division orders, or amounts of gross production; copies of gas contracts or any other agreements pursuant to which Lessee will sell, use, transfer, process, or dispose of the Granted Minerals produced from the Leased Premises; and/or any other information related to the production and sale of the Granted Minerals. Lessee shall meter gas deriving from the Leased Premises at the wellhead, Lessor shall, on an annual basis, have the right to audit the books, accounts, contracts, records, and data of Lessee pertaining to the development and sale of the Granted Minerals.
10. **Royalty Statement, Annual Report.** Upon request of Lessor, Lessee shall furnish to the Lessor a report, including production volumes and sales prices for the Granted Minerals produced and sold from the Leased Premises. Lessee shall provide to Lessor, no less frequently than once per calendar quarter, either on the check stub of a royalty payment or on an attachment to or enclosure with a royalty payment:
- The lease, property, or well names and the well identification numbers on which royalties are being paid;
 - The month and year during which the sales occurred for which payment royalty payments are being made;
 - The total production from the well or wells expressed as the number of barrels of oil or the total amount of gas in thousand cubic feet (MCF) and the volume of any other Granted Minerals, therein which were sold;
 - The price per barrel of oil; the price per MCF of gas; and the price per gallon or barrel of any other Granted Minerals sold; and
 - The name, address, and telephone number of a contact person from whom Lessor may

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obtain information about royalty payments made by the Lessee hereunder.

11. **Shut-In Royalty.** If a well has been completed capable of production in paying quantities, and has been temporarily shut-in for lack of a market, Lessee shall pay Lessor annually, on or before Ninety (90) days of such shut-in event, the sum of One Hundred (\$100.00) Dollars per acre for the first year, and Two Hundred Fifty Dollars (\$250.00) per acre for the year thereafter on the ensuing anniversary. In no event may Lessee maintain this Lease by payment of shut-in royalty beyond a continuous two-year period, and this Lease shall terminate automatically on the first day following the second anniversary date of initial shut-in. Additionally, in no event may Lessee maintain this Lease by payment of shut-in royalty beyond a cumulative three-year period during which all production of Granted Minerals was shut-in, and this Lease shall terminate automatically on the first day following the date that all production of Granted Minerals has been shut-in for a cumulative period of Thirty-Six (36) months. Said cumulative and continuous periods shall reset to zero every ten (10) years, calculated from the expiration of the Primary Term of this Lease, and said periods shall begin anew.
12. **Notice of Intent to Drill and Complete.** Lessee shall supply Lessor, within thirty (30) days of recording, a copy of any Declarations of Pooling and Unitization involving the Granted Minerals. Lessee shall supply Lessor prior written notice of Lessee's intention to complete any wells associated with the Leased Premises at least thirty (30) calendar days prior to said completions.
13. **Diligence.** Lessee shall conduct its drilling operations hereunder utilizing best industry practices in existence at the time of such drilling, and shall otherwise conduct its operations in a good and workmanlike manner as a reasonably prudent operator would under the same or similar circumstances until all drilling and producing operations are completed, or until such time as the final well is plugged and abandoned. Additionally, if Granted Minerals are discovered on or in the Leased Premises, Lessee shall further develop and produce the Leased Premises as a reasonable and prudent operator would, and exercise all due diligence in drilling additional well(s) as may be necessary to fully develop the Leased Premises. Neither the rentals, royalties, nor any other consideration set forth under this Lease shall relieve Lessee of its obligation to reasonably develop and produce the Leased Premises.
14. **Waste Prohibited, Damage.** Lessee shall not commit, or cause to be committed, waste, damage, or pollution to the Leased Premises. Lessee shall take all reasonable steps to prevent its operations from causing or contributing to soil erosion, or to the injury of terraces, grades, embankments, other soil, or structures on the Leased Premises. Lessee shall not pollute the surface or subterranean waters of the Leased Premises, any reservoirs, springs, streams, irrigation ditches, stock ponds, or other wells on the Leased Premises. Lessee shall not decrease the fertility of the soil, damaging any crops, grasses, timber, or pastures on the Leased Premises, and shall not harm or injure any animals, fish, or livestock on or in the Leased Premises, or damage any buildings, roads, structures, or other improvements on the Leased Premises. Lessee shall preserve the Leased Premises, and upon the termination of this Lease, promptly surrender and return the Leased Premises to the Lessor in the same condition, or substantially similar condition, as the Leased Premises were in prior to Lessee taking possession of the Leased Premises. Lessee shall compensate Lessor, its successors or assigns, for damages caused by Lessee to any being or thing which is the subject of this provision.
15. **Well Plugging.** Before abandoning any well associated with this Lease, Lessee shall securely plug and abandon such well or wells in accordance with the rules and regulations of the West Virginia Department of Environmental Protection and the laws of the State of West

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Virginia, and any other governmental agency having jurisdiction.

- 16. **Record Management.** The Lessee shall keep an accurate account of all drilling operations, including but not limited to the following: a log of each well drilled, duly sworn to by the contractor or driller; original gas sales contracts with amendments; gas balancing agreements and schedules; information concerning litigation, settlement agreements, or other agreements relating to sales and pricing of the Granted Minerals.
- 17. **Ratification.** No instrument executed by Lessor shall be effective to constitute a ratification, renewal, extension or amendment of this Lease unless such instrument is clearly titled to indicate its purpose and intent.
- 18. **Compliance with Applicable Law.** This Lease shall be subject to the Constitution and laws of the State of West Virginia and the rules and regulations of the West Virginia Division of Natural Resources and the West Virginia Department of Environmental Protection now or hereafter in force, all of which are made a part and condition of this Lease; provided, that no regulation made after the execution of this Lease affecting either the length of the term hereof, the rate of royalty, or payment hereunder, or the assignment hereof, shall operate to alter the terms and conditions of this Lease. Lessee agrees to comply in all material respects with the laws, rules and regulations of the State of West Virginia and the United States of America.
- 19. **Insurance.** A company licensed by the West Virginia Insurance Commission to do business in the State of West Virginia shall underwrite all policies required by this Lease. Lessee, and/or any person or entity acting on Lessee's behalf under this Lease, shall maintain with one or more such licensed insurance carriers at all times during which this Lease remains in force and effect sufficient workers compensation as required by law. In addition to the foregoing, Lessee shall maintain employer's liability insurance, commercial general liability and umbrella liability insurance, business auto and umbrella liability insurance, and environmental liability insurance in the amount of at least Twenty-Five Million Dollars (\$25,000,000.00), combined single limit, identifying Lessor as an additional insured (except for workers compensation and employer's liability), and shall be primary coverage for Lessor. The required limits can be provided through a combination of general liability policy and umbrella/excess liability policy. Said policy or policies, declaration pages and certificates of insurance thereof shall be delivered to Lessor upon commencement of the Lease, and upon each renewal of said insurance policy. The insurance policies required under this paragraph 19 shall name Lessor as an additional insured, except for workers compensation and employer's liability with regard to the Leased Premises, and shall reflect that the insurer has waived any right of subrogation against the Lessor.
- 20. **Bonding.** Within Thirty (30) days from the Effective Date of this Lease, Lessee shall post a surety bond in favor of the Lessor in an amount of Two Hundred Thousand Dollars (\$200,000.00) to secure payment of all sums due and performance of all obligations arising under this Lease. Proof of said bond shall thereafter be delivered to Lessor.
- 21. **Assignment.** The rights and estate of Lessee (or any permitted assignee or transferee of Lessee) hereunder may not be assigned or otherwise transferred, in whole or in part, without the prior written consent of Lessor, which consent shall not be unreasonably withheld. In the event Lessee proposes to assign or transfer this Lease, the Lessee shall give Lessor written notice of its intent to assign or transfer its interest in the Lease, which notice shall specify the type of assignment or transfer contemplated, the identity and contact information of the proposed assignee or transferee, and the timeframe of the proposed assignment or transfer ("Transfer Notice"). Upon delivery of a Transfer Notice to the Lessor, Lessor shall have Fifteen

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(15) days to either: (a) consent to the proposed assignment or transfer by delivering written consent to Lessee; or (b) in its reasonable discretion, withhold its consent to the proposed assignment or transfer by delivering written notice to Lessee that it is withholding its consent and specifying the reasons therefor. In the event that Lessor fails to respond to a Transfer Notice within the fifteen-day period specified in the immediately preceding sentence, Lessor shall be deemed for all purposes under the law to have approved the assignment or transfer outlined in the Transfer Notice, and to have consented to such assignment or transfer in the same manner as if it would have delivered its written consent to Lessee.

- 22. Default.** The occurrence of any of the following shall be deemed a default of this Lease:
- a. Failure of Lessee to timely pay Lessor any amounts required under this Lease in accordance with paragraph 7.
 - b. If any creditor of Lessee, its agents, and/or assigns, takes any action to execute on, garnish, or attach the Lessee's assets located on or accessing the Leased Premises. This provision shall not impair Lessee's ability to mortgage its interests in the Granted Minerals or the Leased Premises.
 - c. Failure of Lessee to provide Lessor the Transfer Notice as set forth in paragraph 21.
 - d. Failure of Lessee to maintain insurance in the type and amount as set forth within this Lease.
 - e. Shut-in of Lease exceeding the periods set forth in paragraph 11 of this Lease.
- 23. Notice of Default or Breach.** If Lessor considers that Lessee has failed to comply with its obligations under this Lease, whether express and implied, Lessor shall notify Lessee in writing, setting out in what respects Lessee has breached this Lease. Lessee shall then have Thirty (30) days after receipt of said notice to cure all alleged breaches asserted by Lessor or, if it is not practical to cure such alleged breaches within thirty (30) days, then Lessee shall have Thirty (30) days to commence curing the alleged breach and diligently and continuously pursue to completion such cure. If Lessee, having received such written notice of breach of Lease, shall thereafter fail or refuse to satisfy in the timeframes set forth in the immediately preceding sentence, or respond in a meaningful fashion to Lessor's notice within such thirty (30) day period, or such longer period of time if Lessee is in good faith continuously effectuating a cure of such alleged breaches, this Lease shall automatically cease and terminate. Upon such termination, Lessee agrees to (a) immediately and unconditionally surrender possession of the Leased Premises, or of the portion of the Leased Premises included in such notice of breach, and (b) plug and abandon any producing or non-producing well(s).
- 24. Remedies for Default or Breach.** The Lessor shall be entitled to recover from the Lessee any and all royalties, charges, or claims of every kind and nature due and owing and/or arising out of this Lease, upon Lessee's failure to remedy any breach within the applicable cure period and to take immediate possession of the Leased Premises. If Lessor institutes proceedings to clear title or take possession of the Leased Premises and prevails on the merits in such proceedings and is awarded possession of the Leased Premises, Lessor shall be entitled to recover from Lessee its reasonable attorneys' fees and costs, investigation costs, any expert fees, and any other reasonable costs and expenses actually incurred in connection with such proceedings.

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25. **Surrender of Lease.** The Lessee may surrender this Lease or any part of this Lease if, and only if, Lessee is not then in default of any obligations under this Lease and upon payment of all liabilities then accrued and due. Such surrender must be evidenced by written notice delivered to Lessor Thirty (30) days prior to the effective date of surrender. Lessee shall deliver to Lessor a release or releases in recordable form approved by Lessor, and Lessee shall release the applicable portion of this Lease upon expiration. Lessee may not release any portion of this Lease included in a pool or unit as long as Operations are being conducted on such pool or unit. Any partial release must describe all depths and horizons in and under the Leased Premises so released.

26. **No Warranty of Title.**

- a. Lessor makes no representation of title or ownership, either express or implied, and further makes no warranty as to the actual or potential presence of Granted Minerals. Lessee represents it has performed all necessary due diligence regarding the title or ownership of the Granted Minerals, and agrees to be bound by the quantum of acreage as set forth in the Legal Description above.
- b. Lessee shall notify Lessor of any adverse claim to the Leased Premises affecting title to all or a portion of the rights to develop the Granted Minerals, and Lessor may, with the approval of the Attorney General, enter into an escrow arrangement for future rents and royalties accruing to such disputed portion of the Leased Premises under terms and conditions that the Attorney General feels proper to safeguard the rights and interest of the State of West Virginia.
- c. If an adverse claimant files suit against the State of West Virginia or against Lessee claiming title to all or a portion of the Granted Minerals, or if the Lessee, after receiving notice of an adverse claim, institutes litigation in a court of competent jurisdiction to adjudicate the validity of the claim, the rents and royalties accruing to the litigated portion shall be placed in an escrow account until such time as the ownership of the disputed interest is determined by a court of competent jurisdiction.
- d. If a court of competent jurisdiction determines that Lessor does not have title to all or part of the Granted Minerals in the Leased Premises, the rentals, royalties, and bonus thereafter accruing from any part as to which this Lease covers less than the full interest in such Granted Minerals, shall thereafter be paid only in the proportion which the interest therein, if any, covered by this Lease bears to the whole and undivided fee simple estate therein. Any sums of money paid pursuant to this Lease are not reimbursable to Lessee.

27. **Indemnity.** Unless caused by the negligence of Lessor, or any agent, servant, or employee of Lessor, Lessee shall defend, indemnify, protect and hold harmless Lessor and Lessor's heirs, successors, representatives, agents and/or assigns from and against any and all claims, demands, causes of action, liability, loss, damage or expense of any and every kind and nature, including without limitation costs, expenses, and attorneys' fees, for injury (including death), or damage to persons or property (including environmental damage to the surface, waterways, or subsurface estates of any person, firm, corporation, or other entity) arising out of, incidental to, or resulting from (i) the operations or activities of Lessee or Lessee's servants, agents, employees, guests, licensees, invitees or independent contractors on or in the Leased Premises; (ii) the exercise of any right granted under this Lease, and/or; (iii) any obligation imposed under this Lease. Any successor in interest of any rights of Lessee in this Lease shall

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likewise be obligated to defend and indemnify Lessor and Lessor's heirs, successors, representatives, agents and assigns in the same manner as the original Lessee.

- 28. **Limitations on Drilling.** From and after the Effective Date of this Lease, Lessee shall not commence construction of any new well pad that is intended to produce the Granted Minerals from the Leased Premises if such well pad would be located within Five Hundred feet (500') of any outside boundary of the tracts comprising the Leased Premises measured linearly from any point along said tract boundary to the midpoint of the secondary containment berm of a particular well pad. Lessor and Lessee agree that the limitation on pad construction and/or location set forth in this paragraph 28 is intended to reduce any long-term, substantial interference with the public's use of the surface of the Leased Premises as it exists on the date of the Lease. Further, if Lessor determines in its reasonable discretion after conducting a proper investigation that the drilling activities of Lessee related to the production of Granted Minerals from the Leased Premises have created a long-term, substantial interference with the public's use of the surface of the Leased Premises as aforesaid, then Lessor shall have the right to seek from Lessee additional measures or controls to mitigate such long-term, substantial impairment caused by Lessee's said drilling activities.
- 29. **Force Majeure.** If Lessee is prevented from complying with its obligations under this Lease, express or implied (except payment of money), due to scarcity of or inability to obtain or use equipment or material or by operations of Force Majeure, or any federal or state law, or any order, rule or regulation, then, while so prevented, Lessee's obligation to comply with such this Lease shall be temporarily suspended, and Lessee shall not be liable in damages; and this Lease shall be extended only so long as Lessee is prevented by any such cause from conducting Operations on or in the Leased Premises; *provided*, in no event shall Lessee's performance be suspended as a result of Force Majeure, federal or state law, or any rule or regulation for a period in excess of two (2) consecutive years. As used herein, the term "Force Majeure" shall mean acts of God such as flood, fire, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by other cause(s) not within Lessee's control, but shall specifically exclude scarcity, cost, or inability to obtain or use equipment, contracts, personnel, water, or other material(s).
- 30. **Further Assurances.** Each of the parties hereto shall, and shall cause its respective affiliates to, from time to time at the request of the other party, without any additional consideration, furnish the other party such further information or assurances, execute and deliver such additional documents, instruments and conveyances, and take such other actions and do such other things, as may be reasonably necessary in the opinion of counsel to the requesting party to carry out the provisions of this Lease. In the event that Lessor is not the proper agency or instrumentality of the State of West Virginia to enter into this Lease, as stated in paragraph 1 herein, Lessor shall cause all of the proper agencies or instrumentalities of the State of West Virginia, without any additional consideration, to join in this Lease, as Lessor, upon the same terms provided herein.
- 31. **Governing Law.** This Lease shall be governed by the laws of the State of West Virginia and any dispute arising out of this Lease shall be resolved in a West Virginia court of law having jurisdiction thereof.
- 32. **Notices and Payments.** All notices and payments which are permitted or required under this Lease shall be in writing and shall be deemed valid and received if delivered personally; by registered or certified mail, return receipt requested; or by special carrier (such as Federal Express or UPS), with signature required, to the Lessor and/or the Lessee to the following addresses, unless otherwise agreed by the parties in a signed writing:

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a. **To Lessor:**

West Virginia Division of Natural Resources
Attn: Office of Land and Streams
324 Fourth Ave., Room 200
South Charleston, WV 25303-1228

b. **To Lessee:**

SWN Production Company, LLC
Attn: Land Department
10000 Energy Drive
Spring, Texas 77389-4954

33. **Successors in Interest.** The terms, conditions, covenants, obligations, considerations or requirements of this Lease shall extend to and be binding upon the parties hereto, their heirs, successors, executors, administrators, and assigns, all of whom shall be jointly and severally liable.
34. **Severability.** Should any one or more of the provisions in this Lease become or be determined to be void or invalid, in whole or in part, the remainder of this Lease shall remain in full force and effect.
35. **Counterparts.** This Lease may be executed in any number of counterparts, and by different parties in separate counterparts, all of which shall be identical. Each such counterpart shall be deemed to be an original instrument, but all such counterparts together shall constitute but one instrument.

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IN WITNESS WHEREOF, the parties hereunto subscribed their signatures on the day and year first above written.

WEST VIRGINIA DIVISION OF NATURAL RESOURCES, ON BEHALF OF ITSELF AND OF THE STATE OF WEST VIRGINIA

Septi A. Looney

ATTEST:

Stephen S. McDaniel

By: Stephen S. McDaniel, Director
West Virginia Division of Natural Resources

ACKNOWLEDGEMENT FOR WEST VIRGINIA DIVISION OF NATURAL RESOURCES

State of West Virginia

County of Kanawha

Personally appeared before me, the undersigned Notary Public, within and for said County and State, STEPHEN S. MCDANIEL, to me known to be the person who subscribed the name of the West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce, to the foregoing instrument, as its Director, and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce, for the uses and purposes herein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notary Seal on this 4th day of September, 2018.

My Commission Expires: March 3, 2021

Johnathan
Notary Public

(SEAL)



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SWN Production Company, LLC

ATTEST: [Signature]
Aimee Bachtel

[Signature]
By: Brett Massad, Land Director
SWN Production Company, LLC [Initials]

ACKNOWLEDGEMENT FOR SWN PRODUCTION COMPANY, LLC

State of Texas

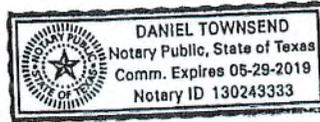
County of Harris

This instrument was acknowledged before me on August 24, 2018, by Brett Massad, Land Director of SWN Production Company, LLC, on behalf of the corporation.

My Commission Expires: May 29, 2019

[Signature]
Notary Public

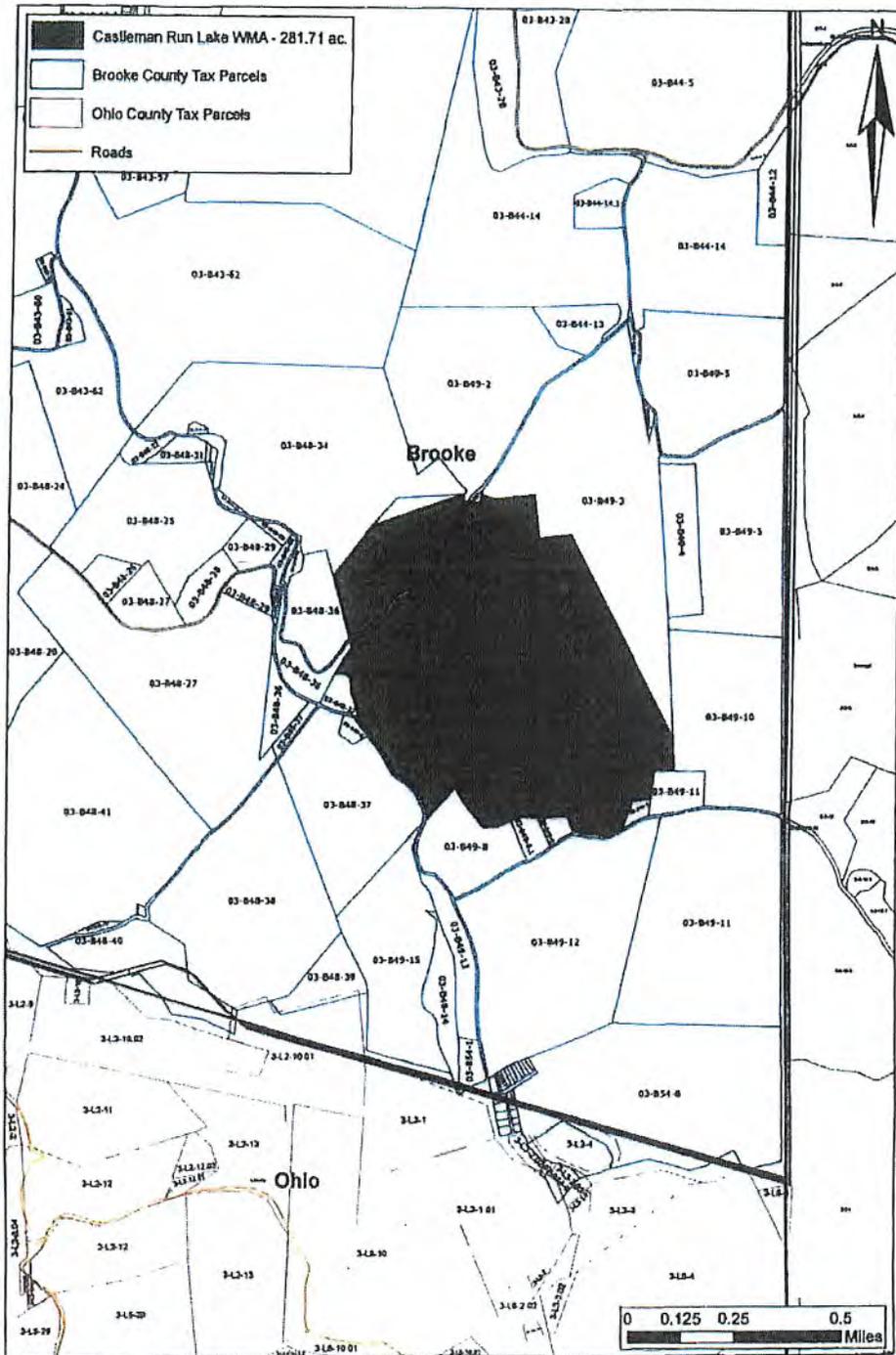
(SEAL)



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5/31/2018

Castleman Run County Tax Map



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SWN Production Company, LLC
179 Innovation Drive
Jane Lew, WV 26378
Tel: 304 884 1610
Fax: 304 471 2497
www.swn.com

4700 00265

September 4, 2018

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

RE: SWN's proposed New Well: Sandra Parr BRK 201H & Sandra Parr BRK 401H in Brooke County, West Virginia, Drilling under Counsleman's Hill Road.

Dear Ms. Adkins:

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

Thank you.

Sincerely,

Michael H. Wilder, RPL
Staff Landman
SWN Production Company, LLC

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

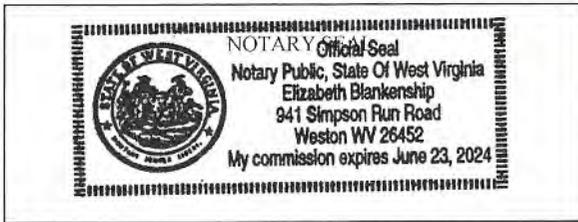
4700 00265

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>P.O. Box 1300</u>
By:	<u>Brittany Woody</u>		<u>Jane Lew, WV 26378</u>
Its:	<u>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 29 day of Aug 2018.

Elizabeth Blankenship Notary Public

My Commission Expires 6/23/2024

Oil and Gas Privacy Notice:

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

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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: 9/11/18 **Date Permit Application Filed:** 9/11/18

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: Anthony Bruce Parr, ET AL
 Address: 120 Jamison Ln.
Wellsburg, WV 26070
 Name: _____
 Address: _____

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

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

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
 Address: _____

COAL OWNER OR LESSEE

Name: Windsor Coal Company
 Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

COAL OPERATOR

Name: _____
 Address: _____

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

Name: See Attachment 13A
 Address: _____

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: _____
 Address: _____

*Please attach additional forms if necessary

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Attachment 13A

OWNER	ADDRESS	CITY	STATE	ZIP	WATER SOURCE
MAHAN MICHAEL A & PAULA M; PARR ANTHONY, SANDRA ETAL	120 JAMISON LN	WELLSBURG	WV	260709733	1

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Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

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Well Location Restrictions

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

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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WV Department of
Environmental Protection

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.

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Environmental Protection

WW-6A
(8-13)

API NO. 47-009 - 00265
OPERATOR WELL NO. Sandra Parr BRK 401H
Well Pad Name: Sandra Parr BRK Pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC

Telephone: 304-884-1610

Email: Brittany_Woody@swn.com

Brittany Woody

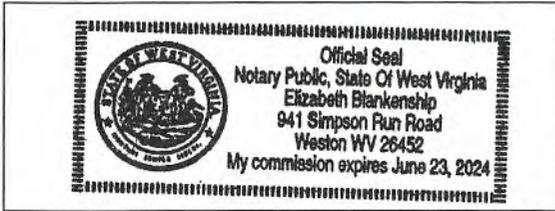
Address: P.O. Box 1300

Jane Lew, WV 26378

Facsimile: 304-884-1690

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 29 day of Aug, 2018.

Elizabeth Blankenship

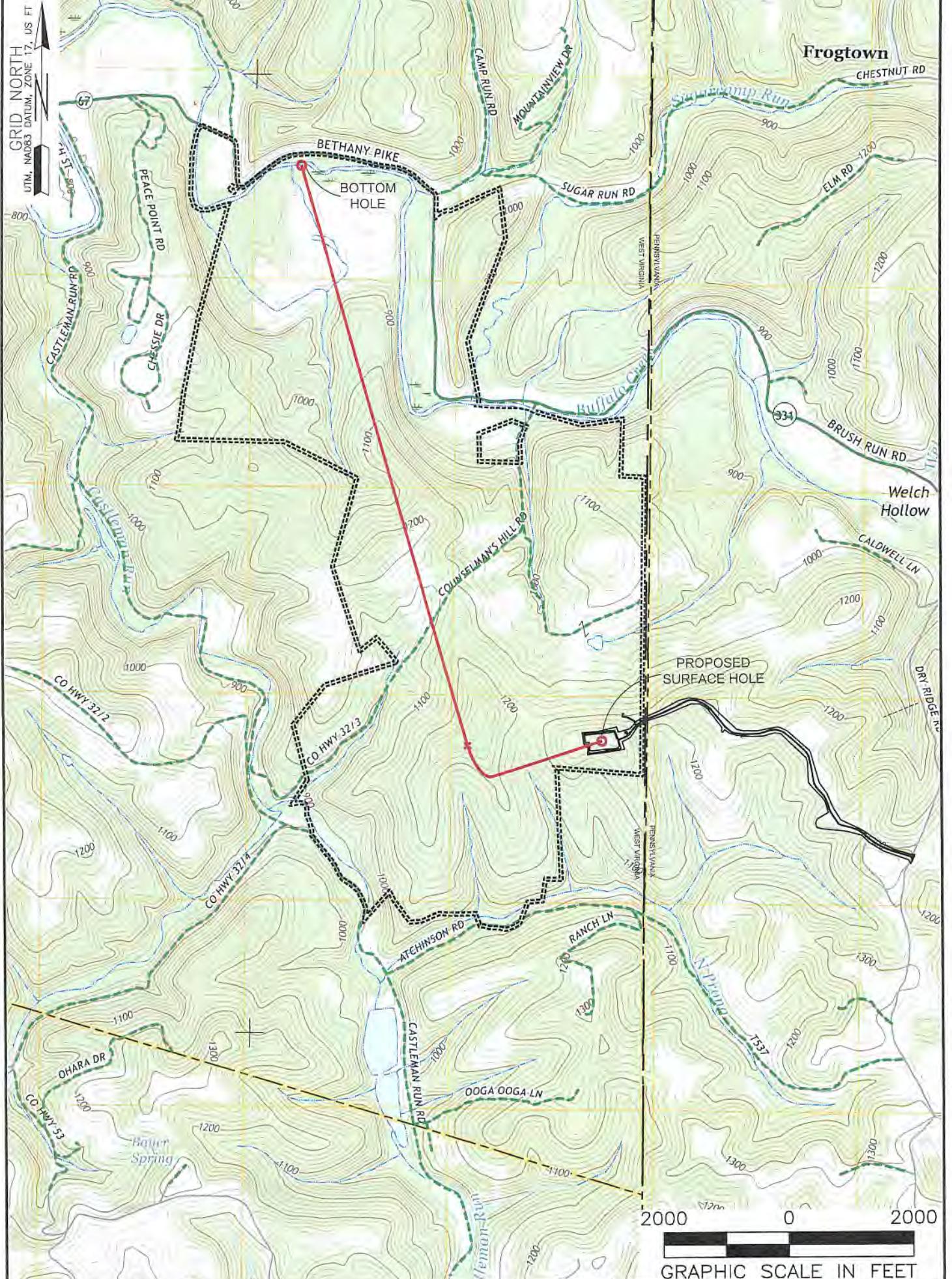
Notary Public

My Commission Expires 6/23/2024

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Office of Oil and Gas
SEP 7 2018
WV Department of
Environmental Protection



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 600 MARKETPLACE AVENUE, SUITE 200
 BRIDGEPORT, WV 26330
 304-933-3119



NOTES ON SURVEY

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

LEGEND:

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

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	RECEIVED Office of Oil and Gas	WELL (FARM) NAME: SANDRA PARR BRK	WELL # 401H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	SEP 7 2018	COUNTY - CODE BROOKE - 069	DISTRICT; BUFFALO DISTRICT	
SURFACE OWNER: ANTHONY BRUCE PARR, ET AL	WV Department of Environmental Protection	USGS 7 1/2 QUADRANGLE MAP NAME BETHANY, WV		

9-00265

**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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: Sandra & Anthony Parr

Address: 2810 McKims Ridge Road
Colliers, WV 26035

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: Windsor Coal Company

Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

MINERAL OWNER(S)

Name: Sandra & Anthony Parr

Address: 2810 McKims Ridge Road
Colliers, WV 26035

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia

County: Brooke

District: Wellsburg

Quadrangle: Bethany

Approx. Latitude & Longitude: 40.179524, -80.521620

Public Road Access: Dry Ridge Road

Watershed: Buffalo Creek

Generally used farm name: Sandra Parr

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Office of Oil and Gas
SEP 7 2018
WV Department of
Environmental Protection

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

Notice is hereby given by:

Well Operator: SWN PRODUCTION COMPANY, LLC

Telephone: 304-884-1810

Email: dee_southall@swn.com or brittany_woody@swn.com

Address: PO BOX 1300
JANE LEW, WV 26378

Facsimile: _____

Oil and Gas Privacy Notice:

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

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF 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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: Sandra & Anthony Parr
Address: 2810 McKims Ridge Road
Colliers, WV 26035

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: Windsor Coal Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

MINERAL OWNER(s)

Name: Sandra & Anthony Parr
Address: 2810 McKims Ridge Road
Colliers, WV 26035

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>40.179524, -80.521620</u>
County: <u>Brooke</u>	Public Road Access: <u>Dry Ridge Road</u>
District: <u>Wellsburg</u>	Watershed: <u>Buffalo Creek</u>
Quadrangle: <u>Bethany</u>	Generally used farm name: <u>Sandra Parr</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 State Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

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

Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: _____

Oil and Gas Privacy Notice:

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

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Office of Oil and Gas
601 State Street, SE,
Charleston, WV 25304
November 7, 2018
WV Department of
Environmental Protection

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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: _____
 Address: _____

 Name: _____
 Address: _____

 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: _____
 Address: _____

MINERAL OWNER(s)
 Name: Leonard & Karen Boyce
 Address: 1162 Northview Road
Wellsburg, WV 26070
 *please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>40.179524, -80.521620</u>
County: <u>Brooke</u>	Public Road Access: <u>Dry Ridge Road</u>
District: <u>Wellsburg</u>	Watershed: <u>Buffalo Creek</u>
Quadrangle: <u>Bethany</u>	Generally used farm name: <u>Sandra Parr</u>

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

Notice is hereby given by:

Well Operator: <u>SWN PRODUCTION COMPANY, LLC</u>	Address: <u>PO BOX 1300</u>
Telephone: <u>304-884-1610</u>	<u>JANE LEW, WV 26378</u>
Email: <u>dee_southall@swn.com or brittany_woody@swn.com</u>	Facsimile: _____

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Office of Oil and Gas
SEP 7 2018
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.

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

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Notice is hereby provided to:

- SURFACE OWNER(s)

Name: Nancy Parr
 Address: 536 Rockdale Road
Follansbee, WV 26037
 Name: _____
 Address: _____
 Name: _____
 Address: _____

- COAL OWNER OR LESSEE

Name: _____
 Address: _____

- MINERAL OWNER(s)

Name: Nancy Parr
 Address: 536 Rockdale Road
Follansbee, WV 26037
 *please attach additional forms if necessary

Notice is hereby given:

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State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>40.179524, -80.521620</u>
County: <u>Brooke</u>	Public Road Access: <u>Dry Ridge Road</u>
District: <u>Wellsburg</u>	Watershed: <u>Buffalo Creek</u>
Quadrangle: <u>Bethany</u>	Generally used farm name: <u>Sandra Parr</u>

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

Address: PO BOX 1300
JANE LEW, WV 26378
 Facsimile: _____

RECEIVED
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 SEP 7 2018
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
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Delivery method pursuant to West Virginia Code § 22-6A-10a

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 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: _____
Address: _____

Name: _____
Address: _____

Name: _____
Address: _____

- COAL OWNER OR LESSEE

Name: _____
Address: _____

- MINERAL OWNER(s)

Name: John Latimer
Address: 3266 West Hampton Pointe Drive
Florence, South Carolina 29501

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Brooke
District: Wellsburg
Quadrangle: Bethany

Approx. Latitude & Longitude: 40.179524, -80.521620
Public Road Access: Dry Ridge Road
Watershed: Buffalo Creek
Generally used farm name: Sandra Parr

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Office of Oil and Gas
SEP 7 2018
WV Department of
Environmental Protection

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

Notice is hereby given by:

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

Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: _____

Oil and Gas Privacy Notice:

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

9-00265

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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: _____
 Address: _____

 Name: _____
 Address: _____

 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: _____
 Address: _____

MINERAL OWNER(s)
 Name: Deborah Starr
 Address: 120 Walker Road
Follansbee, WV 26037
 *please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
 County: Brocke
 District: Wellsburg
 Quadrangle: Bethany

Approx. Latitude & Longitude: 40.179524, -80.521620
 Public Road Access: Dry Ridge Road
 Watershed: Buffalo Creek
 Generally used farm name: Sandra Parr

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Notice is hereby given by:

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

Address: PO BOX 1300
JANE LEW, WV 26378
 Facsimile: _____

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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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: Michael Mahan
Address: 120 Jamison Lane
Wellsburg, WV 26070
Name: _____
Address: _____
Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: _____
Address: _____

MINERAL OWNER(s)

Name: Michael Mahan
Address: 120 Jamison Lane
Wellsburg, WV 26070
*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Brooke
District: Wellsburg
Quadrangle: Bethany

Approx. Latitude & Longitude: 40.179524, -80.521620
Public Road Access: Dry Ridge Road
Watershed: Buffalo Creek
Generally used farm name: Sandra Parr

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Office of Oil and Gas
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WV Department of
Environmental Protection

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Notice is hereby given by:

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

Address: PO BOX 1300
JANE LEW, WV 26378
Facsimile: _____

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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: 11/2/2017 **Date of Planned Entry:** 11/9/2017

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: Raymond Parr

Address: 513 Shady Lane
Follansbee, WV 26037

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: _____

Address: _____

MINERAL OWNER(s)

Name: Raymond Parr

Address: 513 Shady Lane
Follansbee, WV 26037

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>40.179524, -80.521620</u>
County: <u>Brooke</u>	Public Road Access: <u>Dry Ridge Road</u>
District: <u>Wellsburg</u>	Watershed: <u>Buffalo Creek</u>
Quadrangle: <u>Bethany</u>	Generally used farm name: <u>Sandra Parr</u>

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WV Department of
Environmental Protection

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

Notice is hereby given by:

Well Operator: <u>SWN PRODUCTION COMPANY, LLC</u>	Address: <u>PO BOX 1300</u>
Telephone: <u>304-884-1610</u>	<u>JANE LEW, WV 26378</u>
Email: <u>dee_southall@swn.com or brittany_woody@swn.com</u>	Facsimile: _____

Oil and Gas Privacy Notice:

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

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: 08/22/2018 **Date Permit Application Filed:** 9/11/18

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

- HAND DELIVERY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

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

Name: Anthony Bruce Parr, ET AL
Address: 120 Jamison Ln.
Wellsburg, WV 26070

Name: _____
Address: _____

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 540,726.840
County: Brooke Northing: 4,447,793.450
District: Buffalo Public Road Access: Atchinson Rd
Quadrangle: Bethany Generally used farm name: Sandra Parr BRK
Watershed: Buffalo 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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-517-6603
Email: Michael_Yates@SWN.com
Facsimile: 304-884-1691

Authorized Representative: Mike Yates
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-517-6603
Email: Michael_Yates@SWN.com
Facsimile: 304-884-1691

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Office of Oil and Gas
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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.

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: 08/22/2018 **Date Permit Application Filed:** 9/11/18

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>Anthony Bruce Parr, ET AL</u>	Name: _____
Address: <u>120 Jamison Ln.</u>	Address: _____
<u>Wellsburg, WV 26070</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>540,726.840</u>
County: <u>Brooke</u>		Northing: <u>4,447,793.450</u>
District: <u>Buffalo</u>	Public Road Access: <u>Atchinson Rd</u>	
Quadrangle: <u>Bethany</u>	Generally used farm name: <u>Sandra Parr BRK</u>	
Watershed: <u>Buffalo 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 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: SWN Production Company, LLC

Telephone: 304-517-6603

Email: Michael_Yates@SWN.com

Address: PO Box 1300, 179 Innovation Drive

Jane Lew, WV 26378

Facsimile: 304-884-1691

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SEP 7 2018

WV Department of
Environmental Protection

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4700 00265

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

Jim Justice
Governor

Thomas J. Smith, P. E.
Secretary of Transportation/
Commissioner of Highways

December 28, 2017 ✓

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

Subject: DOH Permit for the Sandra Parr Pad, Brooke County

Sandra Parr BRK 401H

Dear Mr. Martin,

The West Virginia Division of Highways has reviewed access to the subject site operated by Southwestern Energy for access to the State Road. The site is accessed from Pennsylvania by a private road not a part of the WVDOH road system.

The operator has signed an 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 January 3, 2012.

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Office of Oil and Gas

SEP 7 2018

Very Truly Yours,

WV Department of
Environmental Protection

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office Oil & Gas Coordinator

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

Product Name	Product Use	Chemical Name	CAS Number
EC6734A (Champion Technologies)	Biocide	Hydrogen Peroxide	7722-84-1
		Acetic Acid	64-19-7
		Peroxyacetic Acid	79-21-0
GYPTRON T-390 (Champion Technologies)	Scale Inhibitor	Methanol	67-56-1
		Nonylphenol Ethoxylate	Proprietary
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
EC6486A (Nalco Champion)	Scale Inhibitor	Amine Triphosphate	Proprietary
		Ethylene Glycol	107-21-1
WFRA-2000 (U.S. Well Services)	Anionic Friction Reducer	Hydrotreated light distillate (petroleum)	64742-47-8
		Propenoic acid, polymer with propenamide	9003-06 9
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
OPTI-FLEX (U.S. Well Services)	Viscosifying Agent	Distillates, petroleum, hydrotreated light	64742-47-8
Econo-CI200 (SWN Well Services)	Corrosion Inhibitor	Methanol	67-56-1
		Oxyalkylated fatty acid	68951-67-7
		Fatty acids	61790-12-3
		Modified thiourea polymer	68527-49-1
		Water	7732-18-5
		Hydrochloric acid	7647-01-0
		Potassium acetate	127-08-2
		Formaldehyde	50-00-0
Ecopol-FEAC (SWN Well Services)	Iron Control	Acetic Acid	64-19-7
		Citric Acid	77-92-9
		Water	7732-18-5
HCL (SWN Well Services)	Hydrochloric Acid	Hydrochloric Acid	7647-01-0
		Water	7732-18-5
FLOJET DRP 1130X (SWN Well Services)	Friction Reducer	Proprietary	Proprietary
FLOJET DR900 LPP (SWN Well Services)	Friction Reducer	Distillates (petroleum) hydrotreated light	64674-47-8
		Ethylene Glycol	107-21-1
		Alcohols, C12-16, Exoxylated propoxylated	68213-24-1
		Fatty Alcohols ethoxylated	Proprietary
		Water	7732-18-5
FR-76 (Halliburton)	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8
		Inorganic Salt	Proprietary
HAI-150E (Halliburton)	Corrosion Inhibitor	No hazardous substance	N/A
FDP-S1176-15 (Halliburton)	Friction Reducer	Polyacrylate	Proprietary
		Hydrotreated light petroleum distillate	64742-47-8
LP-65 MC (Halliburton)	Scale Inhibitor	Organic phosphonate	Proprietary
		Ammonium Chloride	12125-02-9
CarboNRT	Tracer	Ceramic Proppant	66402-68-4

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WV Department of
Environmental Protection



NORTH

- LEGEND**
- PROPOSED GAS WELL
 - EXISTING GAS WELL
 - EXISTING INDEX CONTOUR
 - EXISTING INTER CONTOUR
 - GASLINE
 - LIMITS OF DISTURBANCE
 - RIP RAP
 - EDGE OF WELL PAD
 - EDGE GRAVEL ACCESS
 - EDGE OF PAVEMENT
 - CULVERT (SIZE AS NOTED)
 - FENCE

WVDEP OOG
ACCEPTED AS-BUILT

VJ 2/7/2018

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Office of Oil and Gas
SEP 18 2018
WV Department of
Environmental Protection

JAMES W. & PATRICIA
MCKEEN
TAX MAP B49 - PAR. 3
110 ACRES±

MICHAEL A. AND PAULA M.
MAHAN, ET AL
TAX MAP B49 - PAR. 4
20 ACRES±

ANTHONY BRUCE PARR, ET AL
TAX MAP B49 - PAR. 5
132 ACRES±

WELLSITE LOCATIONS	NAD 83 WEST VIRGINIA NORTH ZONE	
	LATITUDE	LONGITUDE
BEGINNING OF MAIN ACCESS ROAD	40.174563	-80.503704
MAIN ACCESS ROAD AT PAD	40.179560	-80.520766
CENTER OF PAD	40.179497	-80.521581
GATHERING AREA	40.175540	-80.506555

TANK NUMBERS	UTM METERS	
	NORTHING	EASTING
1	4447808.752	540649.161
2	4447809.438	540653.721
3	4447804.198	540650.152
4	4447805.189	540654.706
5	4447799.943	540650.833
6	4447800.629	540655.392



C&E
Civil & Environmental Consultants, Inc.
600 Marketplace Ave • Suite 200 • Bridgeport, WV 26330
Ph: 304.933.3119 • Fax: 304.933.3327
www.cecinc.com

SOUTHWESTERN PRODUCTION COMPANY
SANDRA PARR WELL PAD
BUFFALO DISTRICT
BROOKE COUNTY, WEST VIRGINIA
SANDRA PARR RECLAMATION AS-BUILT

DRAWN BY: K.E.S. CHECKED BY: JDR APPROVED BY: DEM FIGURE NO.: AS3.7
DATE: MAY 2017 DWG SCALE: AS NOTED PROJECT NO: 172-289

P:\172-289\Survey\Draw\172289-SWP-PARR-AS-BUILT-2.dwg [12/8/2017 - 12:02:07 PM] - [AutoCAD] - [12/20/2017 5:00 PM]

172-289-6

