



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

Tuesday, April 24, 2018
WELL WORK PERMIT
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit approval for WILLIAM RODGERS OHI 6H
47-069-00267-00-00

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: WILLIAM RODGERS OHI 6H
Farm Name: RODGERS WILLIAM I & DOH
U.S. WELL NUMBER: 47-069-00267-00-00
Horizontal 6A New Drill
Date Issued: 4/24/2018

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.

PERMIT CONDITIONS 4706900267

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 69- Ohio 3-Liberty 648- Valley Grove
Operator ID County District Quadrangle

2) Operator's Well Number: William Rodgers OHI 6H Well Pad Name: William Rodgers OHI Pad

3) Farm Name/Surface Owner: William I. Rodgers & Douglas W. Rodgers Public Road Access: Rt. 40

4) Elevation, current ground: 1280' Elevation, proposed post-construction: 1280'

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

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Target Formation- Marcellus, Target Top TVD- 6625', Target Base TVD- 6670', Anticipated Thickness- 45', Associated Pressure- 3983'

S. V. O. 11.9.17

8) Proposed Total Vertical Depth: 6639'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 18451'

11) Proposed Horizontal Leg Length: 11,423'

12) Approximate Fresh Water Strata Depths: 345'

13) Method to Determine Fresh Water Depths: offset wells; WR-35; SWN petrophysical salinity profile

14) Approximate Saltwater Depths: 819' top of saline water determined by SWN petrophysical salinity profile

15) Approximate Coal Seam Depths: 664'

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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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	445'	445'	431 sx/CTS
Coal	9 5/8"	New	J-55	36#	2126'	2126'	820 sx/CTS
Intermediate	7"	New	J-55	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	18451'	18451'	Lead 966x101 2760x100' Inside Liner
Tubing	2 3/8"	New	HCP-110	4.7#	Approx. 6556'	Approx. 6556'	
Liners							

C. J. O. 10-11-17

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface 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	1.20/15% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/15% Excess
Tubing	2 3/8"	4.778"	0.190				
Liners							

PACKERS

Kind:	10K Arrowset AS1-X			
Sizes:	5 1/2"			
Depths Set:				

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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): 10.95

22) Area to be disturbed for well pad only, less access road (acres): 8.17

23) Describe centralizer placement for each casing string:

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

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

See Attachment ***

25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Intermediate Surface	S001	accelerator	calcium chloride	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
	D065	dispersant	sodium polynaphthalene sulfonate	9008-63-3
			sodium sulfate	7757-82-6
	D201	retarder	chrystalline silica	14808-60-7
metal oxide			proprietary	
D153	anti-settling	chrystalline silica	14808-60-7	

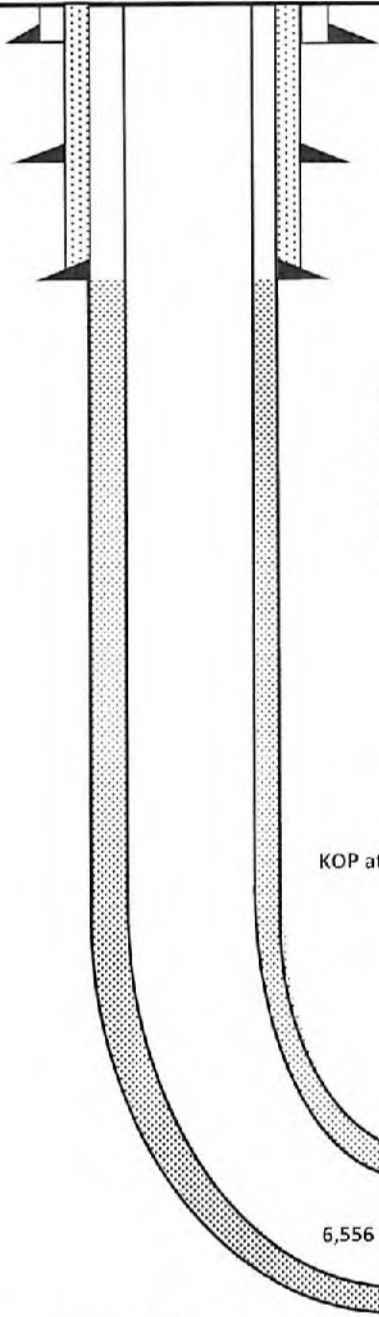
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04/27/2018

Southwestern Energy Company

Proposed Drilling Program

Well: WILLIAM RODGERS OHI 6 Re-entry Rig: TBD
 Field: PANHANDLE FIELD \ Prospect: PANHANDLE
 County: OHIO State: WV
 SHL: 40.1068 Latitude -80.5322 Longitude
 BHL: 40.0754 Latitude -80.5197 Longitude
 KB Elev: 1,306 ft MSL KB: 26 ft AGL GL Elev: 1,280 ft MSL



C. Hall
 10.11.17

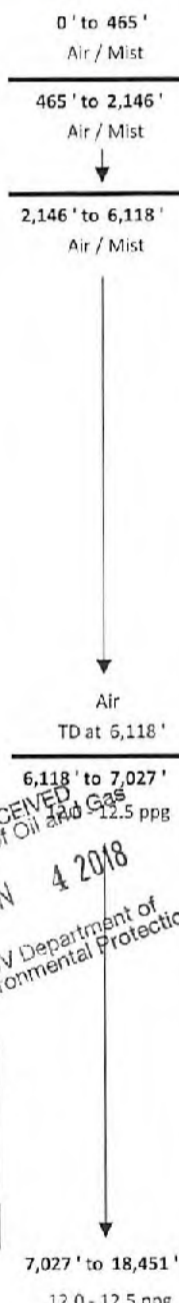
Tubular Detail

	Size (in)	Weight	Grade	From	To
Conductor	20	94.0 #	H-40	0'	100'
Surface	13.375	48.0 #	H-40	0'	445'
Intermediate	9.625	36.0 #	J-55	0'	2,126'
Production	5.5	20.0 #	HCP-110	0'	18,451'

Cement Detail

	Sacks	Class	Density
Conductor	151	A	19.3
Surface	431	A	15.6
Intermediate	820	A	15.6
Production Lead	866	A	15.6
Production Tail	2760	A	15.6

Water Depth - 345' TVD
 Coal Depth - 664' TVD
 TVD - 6,639'
 TMD - 18,451'



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Created by: C. R. Hall on 09/18/2017

04/27/2018

October 10, 2017

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

RE: Proposed New Well William Rodgers OHI 6H

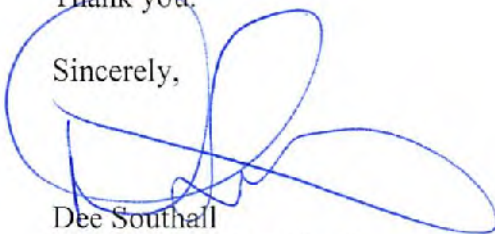
Dear Ms. Adkins

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

If you have any questions or desire additional information, please me at 304-884-1614

Thank you.

Sincerely,



Dee Southall
Senior Regulatory Analyst
Southwestern Energy Production Company, LLC

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

WW-9
(4/16)

API Number 47 - 069 - _____
Operator's Well No. William Rodgers OHI 6H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Upper Ohio South Quadrangle Valley Grove

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 34-155-22403, 34-050-24067, 34-113-28776, 34-167-23862, 34-155-23706, 34-121-23096, 34-156-21603)
- 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, Wetzell 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 [Signature]

Company Official (Typed Name) Dee Southall

Company Official Title Senior Regulatory Analyst

REC'D
Office of Oil and Gas
JAN 4 2018
WV Department of Environmental Protection

Subscribed and sworn before me this 13th day of November, 2017

Brittany R Woody Notary Public

My commission expires 11/27/22



SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 10.95 Prevegetation pH _____

Lime as determined by pH test min.2 Tons/acre or to correct to pH 6.5

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:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature] 12.6.17

Comments: _____

Title: Oil & Gas Inspector

Date: 12-6-17

Field Reviewed? Yes No

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Attachment 3A

Drilling Mediums

Synthetic Oil

Brine

Barite

Calcium Chloride

Lime

Organophilic Bentonite

Primary and Secondary Emulsifiers

Gilsonite

Calcium Carbonate

Friction Reducers

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04/27/2018



WVD Seeding Specification



To Order Seed contact Lyndsi Eddy Flippo office 570-995-4271 cell 501-269-5451 lyndsi_eddy@swn.com (please allow 7 to 10 days for delivery)

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

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

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

**MARCELLUS WELL DRILLING PROCEDURES
AND
WELL SITE SAFETY PLAN**



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

**API NO. 47-XXX-XXXXX
WELL NAME: William Rodgers OHI 6H
Valley Grove QUAD
Liberty DISTRICT
OHIO COUNTY, WEST VIRGINIA**

Submitted by:

Dee Southall

Date: 6/8/2017

Senior Regulatory

Title: Analyst

SWN Production Co., LLC

Approved by:

A handwritten signature in blue ink, appearing to be "O. J. + Gas Inspector".

Date: 10-11-17

Title: O. J. + Gas Inspector

Approved by:

Date: _____

Title: _____

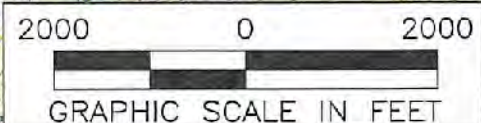
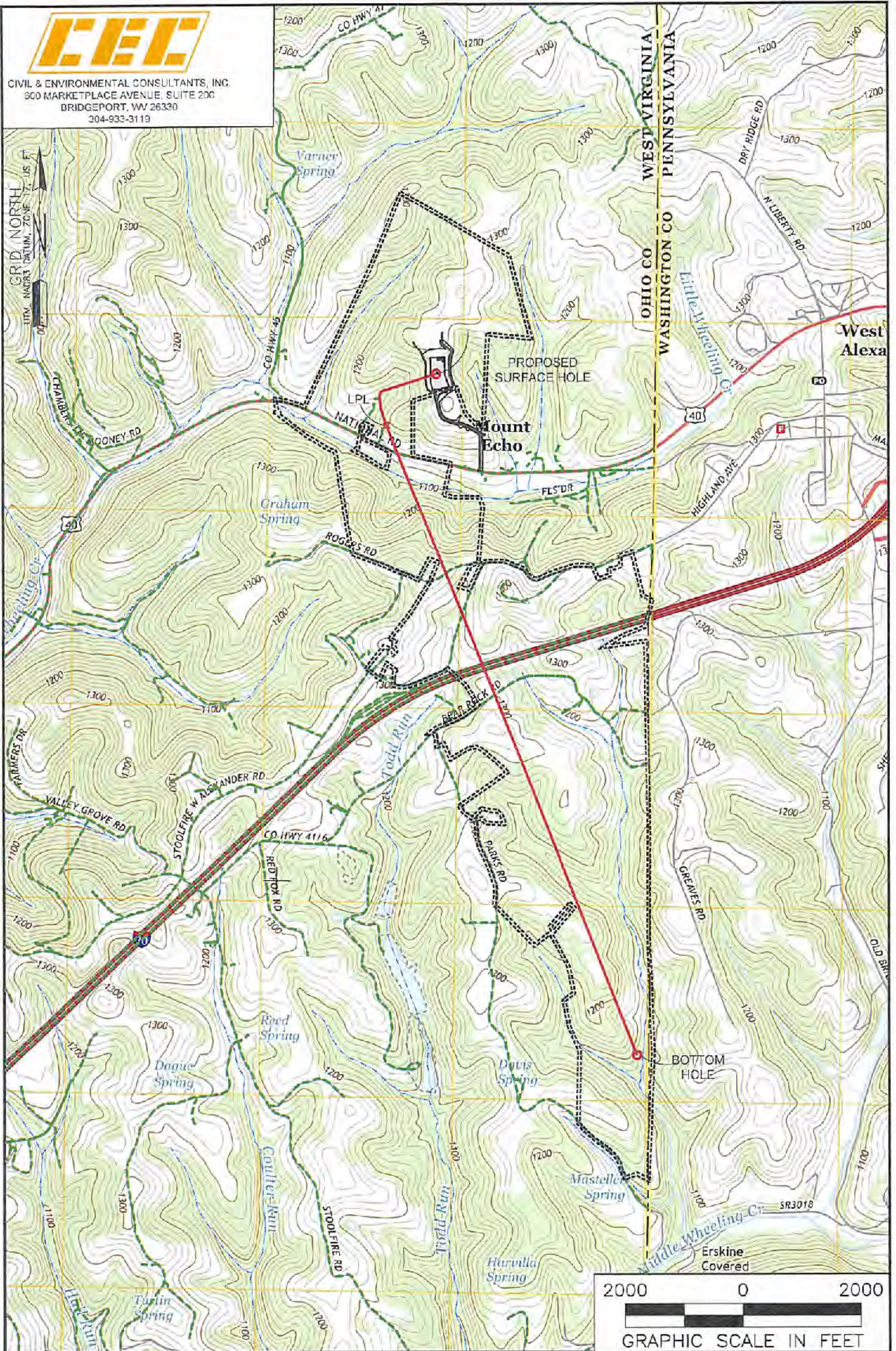
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SWN PRODUCTION COMPANY, LLC – CONFIDENTIAL

04/27/2018



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 500 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.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

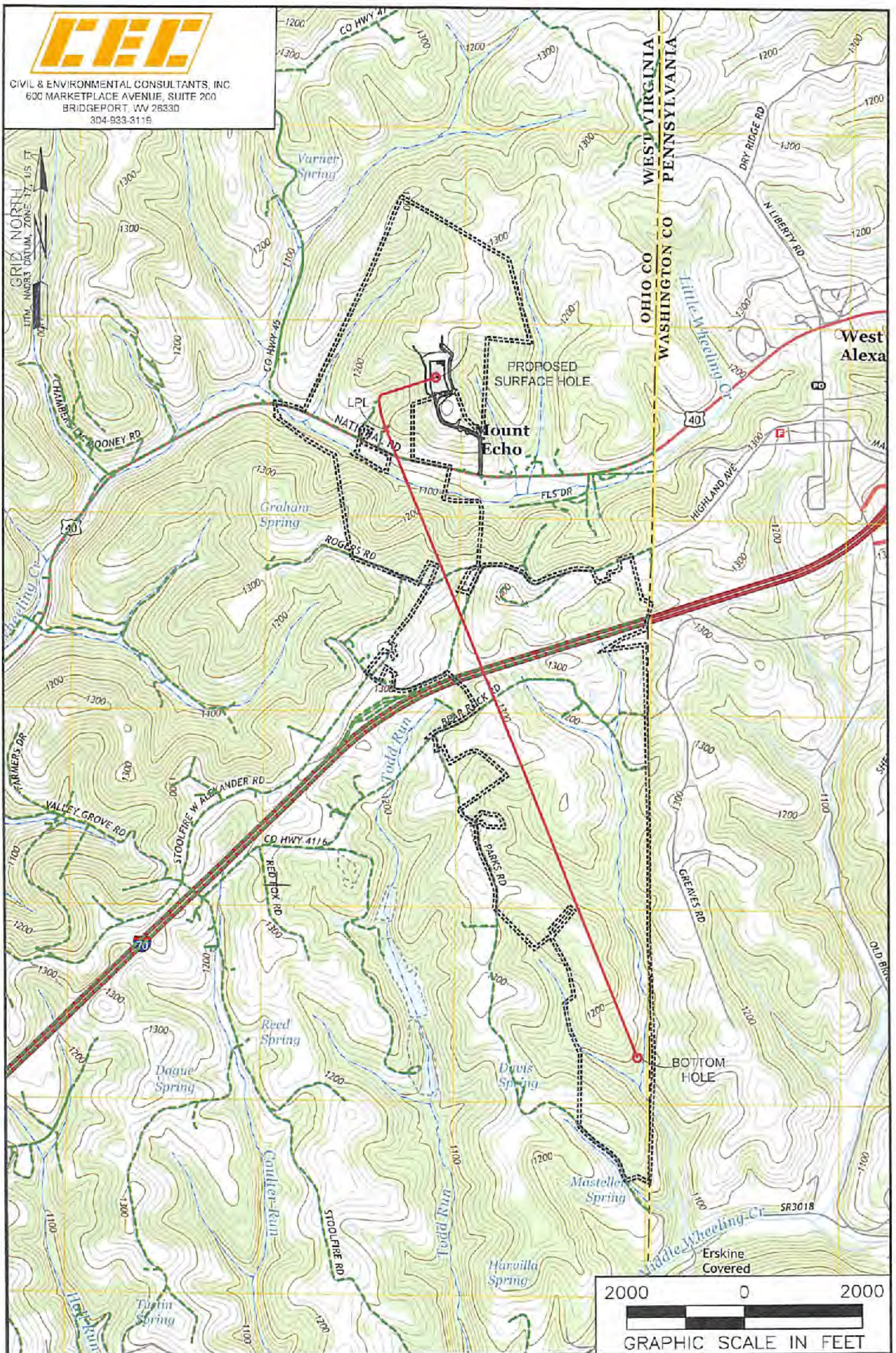
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LANDING POINT LOCATION
- FLOOD FLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

04/27/2018

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: WILLIAM RODGERS OHI	WELL # 6H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY - CODE OHIO - 069	DISTRICT: LIBERTY DISTRICT	
SURFACE OWNER: RODGERS WILLIAM I & DOUGLAS W	USGS 7 1/2 QUADRANGLE MAP NAME VALLEY GROVE, WV		



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.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

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

WELL OPERATOR:
 SWN PRODUCTION COMPANY, LLC
 ADDRESS:
 P.O. BOX 1300 JANE LEW, WV 26378
 SURFACE OWNER:
 RODGERS WILLIAM I & DOUGLAS W

WELL (FARM) NAME:
 WILLIAM RODGERS OHI
 COUNTY - CODE
 OHIO - 069
 USGS 7 1/2 QUADRANGLE MAP NAME
 VALLEY GROVE, WV

WELL #
 6H
 SERIAL #
 XXXX
 DISTRICT;
 LIBERTY DISTRICT

04/07/2018

Latitude: 40°07'30" (SHL)

SURFACE HOLE 9018'

Latitude: 40°05'00" (BHL)

BOTTOM HOLE 5508'

Longitude: 80°30'00" (BHL)

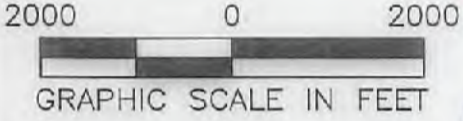
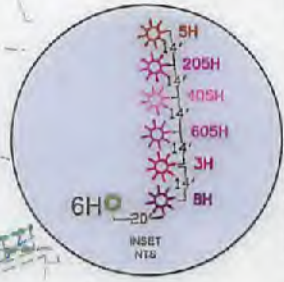
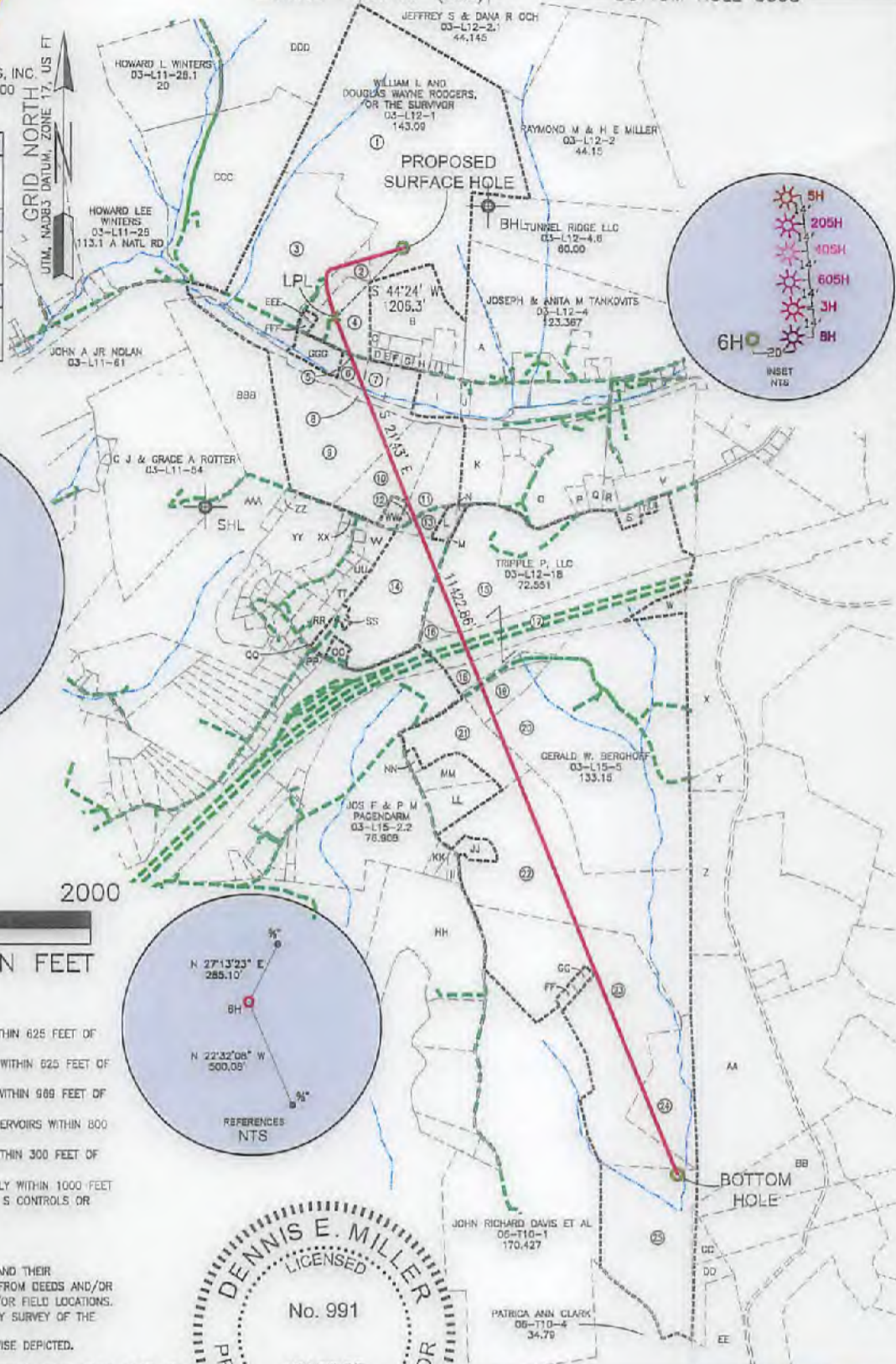
Longitude: 80°30'00" (SHL)



CIVIL & ENVIRONMENTAL CONSULTANTS, INC. 600 MARKETPLACE AVENUE, SUITE 200 BRIDGEPORT, WV 26330 304-833-3119

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,713.375
EASTING: 539,865.644
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,446.525
EASTING: 539,612.903
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,435,235.103
EASTING: 540,954.690

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



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 900 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)

WILLIAM RODGERS OHI

OPERATOR'S WELL #: 6H

API WELL #: 47 069 00267

STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1279.7

DISTRICT: LIBERTY DISTRICT COUNTY: OHIO QUADRANGLE: VALLEY GROVE

SURFACE OWNER: RODGERS WILLIAM I & DOUGLAS W ACREAGE: 143±

OIL & GAS ROYALTY OWNER: RODGERS WILLIAM I & DOUGLAS W ACREAGE: 143±

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

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,639 TDV 18,431 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL

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

LEGEND:	PROPOSED SURFACE HOLE / BOTTOM HOLE	SURVEYED BOUNDARY	REVISIONS:	DATE: 04-03-2018
EXISTING / PRODUCING WELLHEAD	DRILLING UNIT	LEASE BOUNDARY	REVISED WELL REFERENCE 04-03-2018	DRAWN BY: K.E.S.
LPL LANDING POINT LOCATION	EXISTING WATER WELL	PROPOSED PATH		SCALE: 1" = 2000'
EXISTING SPRING				DRAWING NO: 171-944
				WELL LOCATION PLAT

04/27/2018



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	William I. Rodgers and Douglas Wayne Rodgers, or the survivor	3-L12-1	143.09
2	Cathy J. Caldwell and Jerry W. Caldwell, her husband	3-L12-6	5.515
3	Marion S. Mazgaj and Mildred J. Mazgaj, his wife	3-L11-62	52.630
4	Todd M. Maxwell	3-L12-27	11.7465
5	West Virginia Department of Transportation	National Road aka SR 40	
6	Terry L. Fordyce	3-L12-23	2.5791
7	Shaun Lemoine Fordyce and Jason Eric Fordyce	3-L12-24	2.9007
8	Tunnel Ridge, LLC	3-L12-32	17.022
9	Theresa Watkins and Mark Watkins, wife and husband	3-L11-60	40.00
10	Tunnel Ridge, LLC	3-L12-25	17.353
11	Tunnel Ridge, LLC	3-L12-25.1	12.147
12	Commissioners of Ohio County	Rogers Road	
13	Ronald Alan Dille and Virginia Marie Dille, his wife	3-L12-18.1	2.709
14	Frances L. Hall (Life Estate); Robert H. Hall and Laura L. Hall, his wife; David Lee Hall and Sandra Sue Hall, his wife; Mary Pasco and Thomas P. Pasco, her husband	3-L15-1.1	32.505
15	Triple P, LLC	3-L12-18	72.551
16	Allen O. Davis, Sr. and Frances A. Turner, father and daughter	3-L12-18.6	1.331
17	West Virginia Department of Transportation	170	
18	Triple P, LLC	3-L12-18.8	7.44
19	Triple P, LLC	3-L12-18.9	7.37
20	Gerald W. Berghoff	3-L15-5	133.15
21	Gerald W. Berghoff	3-L15-2.6	15.264
22	Lucas B. Oliver	3-L15-4	83.759
23	Jacob S. McCamic	3-L15-4.6	85.656
24	Benjamin Robert Moore (LE) Benjamin Robert Moore and Heidi Lee Moore	6-T5-3	20.088
25	Karen Lynn Briggs and Henry William Briggs	6-T10-4.2	44.408

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	Dillie Jack M & J	3-L12-4.1	9.63
B	William I. Rodgers and Douglas Wayne Rodgers	3-L12-5.1	17.163
C	Fleming David H & M J	3-L12J-26	.309
D	Vanriper Craig L & Melanie J	3-L12J-12	0.4491
E	Burrows William E & M L	3-L12J-13	0.2470
F	Burrows WM E & Marg L	3-L12J-14	0.4950
G	Johnston Rieh D & P I	3-L12J-15	0.4958
H	Rodgers William I & Douglas W	3-L12J-23.1	1.4325
I	Douglas J. Plack and Christine M. Plack	03-L12-28	6.41
J	Scott McCave	3-L12-10.3	1.0077
K	Dennis E. McFarland and Nancy M. Bris	3-L12-22	13.16
L	Ronald A. Dille and Virginia M. Dille and Sylvia Masteller (LE)	3-L12-18.2	2.135
M	Triple P LLC	3-L12-18.3	.099
N	Ronald A. Dille and Virginia M. Dille and Sylvia Masteller (LE)	3-L12-18.4	.487
O	Lemasters Barbara A	3-L12-21	36.828
P	Lemasters Barbara A	3-L12-21.2	1.393
Q	Jason and Melissa Bedillion	3-L12-21.1	2.0254
R	Richard L. Frye	3-L12-15	22.461
S	Park Robert L & B L	3-L12-18.5	1.16
T	Triple P LLC	3-L12-19	.341
U	Triple P LLC	3-L12-19.1	.341
V	Noble Vera Jane C	3-L12-20	11.5214
W	Park Jesse L & B V	3-L12-18.7	88.342
X	William A. & Dana J. Mikolay	230-08-07	22.13
Y	Herbert L. Bolosky	230-08-15.2	4.66
Z	A. L. Jr. & Eleana Morrison	230-08-15	19.62
AA	Heidi L. & Benjamin R. Moore	230-08-10	67.83
BB	Thomas & Martha Greaves	230-08-12	17.44
CC	Karen Lynn Briggs	680-08-03	3.21
DD	Karen Lynn Briggs	680-08-03	5.53
EE	Patricia Ann Clark	680-08-03	29.32
FF	Jacob S. and Melissa A. McCamic	3-L15-4.3	1.115
GG	Jacob S. and Melissa A. McCamic	3-L15-4.4	1.231
HH	State of West Virginia for the use and benefit of the Department of Natural Resources	6-T5-2	43.004
II	Jewett Clarence G and Tracy	3-L15-4.2	1.13
JJ	Lucas B. Oliver	3-L15-4.5	2.453
KK	Sally Morgan	3-L15-2.4	1.809
LL	Ernest Lawrence F & Deborah K	3-L15-4.1	6.935
MM	Ernest Lawrence F & Deborah	3-L15-3	6.935
NN	Gyelda Robert J & Vicki L	3-L15-2.3	0.986
OO	Wood Brenton R & Kelly S	3-L15-1.2	1.307
PP	Hartzell John R & Karen E	3-L14-39	1.029
QQ	Andrew J. Nunes	3-L11-48.9	0.04
RR	White William R & Doris R	3-L14-54	2.469
SS	Hall Robert H & L L	3-L15-7	.938
TT	Hall Robert H & Laura L	3-L11-48.1	2.000
UU	Klages Lloyd A Jr & Amy	3-L11-48.10	1.167
VV	Klages Lloyd A Jr & Amy	3-L12-30	3.000
WW	Jonathan Greer	3-L12-25.2	2.00
XX	JSNE LLC	3-L11-46.8	4.876
YY	John J. and Michelle L. Wolen	3-L11-46.11	78.63
ZZ	Jeffrey B. Powers	3-L11-46.20	1.00
AAA	Lloyd A. Klages, Jr.	3-L11-46.18	61.2340
BBB	Mark and Theresa Watkins	3-L11-60	40.000
CCC	Creighton James R & Martha E	3-L11-29	70.05
DDD	Timmy B. & Amy Lynn Minch	3-L9-12	109.875
EEE	Griffith Raymond E & R E	3-L11-59	1.928
FFF	Larry Michael Patriok	03-L11-68	0.530
GGG	Mazgaj Marion S & Mildred J	3-L11-67	4.48

04/27/2018

REVISIONS: △ REVISED WELL REFERENCE 04-03-2018	COMPANY: SWN Production Company, LLC	SWN ^{R+V+0} Production Company™
	OPERATOR'S WILLIAM RODGERS OHI	DATE: 04-03-2018
	WELL #: 6H	DRAWN BY: K.E.S.
	DISTRICT: LIBERTY DISTRICT	SCALE: N/A
	COUNTY: OHIO	DRAWING NO: 171-944
	STATE: WV	WELL LOCATION PLAT 2

WW-6A1
(5/13)

Operator's Well No. William Rodgers OH1 6H

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

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

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

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

**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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Office of Oil and Gas
JAN 4 2018
WV Department of
Environmental Protection

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.

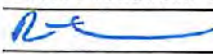
Well Operator: SWN Production Company
By: 
Its: Staff Landman

EXHIBIT "A"
 Attached to and made a part of the State of West Virginia Oil and Gas Permit Form, WV-651, by SWN Production Company LLC, Operator
 William Rodgers 6H
 Ohio County, West Virginia

#	TMP	SURFACE OWNER	LEASE #	LESSOR	LESSEE	ROYALTY	BK/P#
1)	3-112-1	William J Rodgers and Douglas Wayne Rodgers, or the survivor	732566-000	William J Rodgers, a married man, and Douglas W. Rodgers, a single man	TriEnergy Holdings, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	810/374 828/708 893/611
2)	3-112-6	Cathy J. Caldwell and Jerry W. Caldwell, her husband	738660-000	Cathy J. Caldwell &/s/ Cathy Caldwell and Jerry W. Caldwell &/s/ Jerry Caldwell, wife and husband	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	851/355 893/764
3)	3-111-62	Marion S. Mozgol and Mildred J. Mozgol, his wife	736870-000	Marion S. Mozgol and Mildred J. Mozgol, husband and wife	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	821/654 859/608
4)	3-112-27	Todd M. Maxwell	731405-000	Todd M. Maxwell, a single man	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	819/511 893/527
5)	3-112-40	West Virginia Department of Transportation aka SR 40	732590-000	West Virginia Department of Transportation	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	830/11 893/611
6)	3-112-23	Terry L. Fedyce	737391-000	Terry L. Fedyce, a single man	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	890/741 893/710
7)	3-112-24	Shaun Lemoine Fedyce and Jason Eric Fedyce	737354-000	Shaun Lemoine Fedyce, a single man, and Jason Eric Fedyce, a married man dealing in the sole and separate property	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	890/232 893/710
8)	3-112-32	Tunnel Ridge, LLC	735204-000	Tunnel Ridge, LLC	Chesapeake Appalachia, LLC SWN Production Company, LLC	16.75%	865/672 893/778
9)	3-111-60	Theresa Watkins and Mark Watkins, wife and husband	730047-000	Lloyd A. Klages and Bertha L. Klages, his wife	Great Lakes Energy Partners, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	778/278 808/521 893/515
10)	3-112-25	Tunnel Ridge, LLC	730047-000	Lloyd A. Klages and Bertha L. Klages, his wife	Great Lakes Energy Partners, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	778/278 808/521 893/515
11)	3-112-25.1	Tunnel Ridge, LLC	730047-000	Lloyd A. Klages and Bertha L. Klages, his wife	Great Lakes Energy Partners, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	12.50%	778/278 808/521 893/515
12)	Rogers Road	Commissioners of Ohio County	Pending	West Virginia Department of Transportation	SWN Production Company, LLC	20.00%	928/788
13)	3-112-18.1	Ronald Alan Dills and Virginia Marie Dills, his wife	734753-000	Ronald Alan Dills and Virginia Marie Dills, husband and wife	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	859/531 893/754
14)	3-112-4.1	Frances L. Hall (Life Estate); Robert H. Hall and Laura L. Hall, his wife; David Lee Hall and Sandra Sue Hall, his wife; Mary P. Pasco and Thomas P. Pasco, her husband	738512-000	Frances L. Hall, a widow (Life Estate Interest); Robert H. Hall and Laura L. Hall, husband and wife (Remainder Interest); David Lee Hall and Sandra Sue Hall, husband and wife (Remainder Interest); Mary P. Pasco and Thomas P. Pasco, wife and husband (Remainder Interest)	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	827/338 893/588
15)	3-112-18	Triple P, LLC	736503-001	Deborah Lynn Plummer, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	827/184 827/203
16)	3-112-18	Triple P, LLC	736503-002	Patricia Parzold, a married woman dealing in her sole and separate property	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	827/186 893/680
17)	3-112-18	Triple P, LLC	736503-003	Robert Park &/s/ Robert Louis Park and Barbara Lee Park, husband and wife	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	827/186 893/680

Office of Oil and Gas
 RECEIVED
 JAN 4 2018
 WV Department of Environmental Protection

4706900267

04/27/2018

EXHIBIT "A"
 Attached to and made a part of this State of West Virginia Oil and Gas Permit Form, "WV-601, by SWN Production Company LLC, Operator
 William Rodgers 6th
 Ohio County, West Virginia

16) 3-112-18-5	Allen D. Davis, Sr. and Frances A. Turner, father and daughter	736503-000	Allen D. Davis, Sr., a widower and Frances A. Turner, a single woman	Cheapeake Appalachia, LLC SWN Production Company, LLC	14.00%	832/184 885/680
		736503-001	Deborah Lynn Plummer, a married woman dealing in her sole and separate property			
		736503-002	Patricia Paetzold, a married woman dealing in her sole and separate property			
		736503-003	Robert Park a/k/a Robert Louis Park and Barbara Lee Park, husband and wife			832/184 832/203 832/196 832/192 885/680
17) 170	West Virginia Department of Transportation	736515-000	Allen D. Davis, Sr., a widower and Frances A. Turner, a single woman	Cheapeake Appalachia, LLC SWN Production Company, LLC	14%	
		736503-001	Deborah Lynn Plummer, a married woman dealing in her sole and separate property			832/184 832/203 832/196 832/192 885/680
		736503-002	Patricia Paetzold, a married woman dealing in her sole and separate property			
		736503-003	Robert Park a/k/a Robert Louis Park and Barbara Lee Park, husband and wife			
18) 3-112-18-8	Troble P. LLC	736503-003	Deborah Lynn Plummer, a married woman dealing in her sole and separate property	Cheapeake Appalachia, LLC SWN Production Company, LLC	18.00%	832/184 832/203 832/196 885/680
		736503-001	Patricia Paetzold, a married woman dealing in her sole and separate property			
		736503-002	Robert Park a/k/a Robert Louis Park and Barbara Lee Park, husband and wife			
		736503-003	Deborah Lynn Plummer, a married woman dealing in her sole and separate property			
19) 3-112-18-9	Tripp P. LLC	736503-003	Robert Park a/k/a Robert Louis Park and Barbara Lee Park, husband and wife	Cheapeake Appalachia, LLC SWN Production Company, LLC	18.00%	832/184 832/203 832/196 885/680
		736503-001	Patricia Paetzold, a married woman dealing in her sole and separate property			
		736503-002	Robert Park a/k/a Robert Louis Park and Barbara Lee Park, husband and wife			
		736503-003	Deborah Lynn Plummer, a married woman dealing in her sole and separate property			
20) 3-115-5	Gerald W. Bergloff	730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife	Great Lakes Energy Partners, LLC Cheapeake Appalachia, LLC SWN Production Company, LLC	12.50%	775/212 808/382 883/527
		730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife			
		730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife			
21) 3-115-2-6	Gerald W. Bergloff	730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife	Great Lakes Energy Partners, LLC Cheapeake Appalachia, LLC SWN Production Company, LLC	12.50%	775/212 808/382 883/527
		730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife			
		730225-000	Gerald W. Bergloff and Bonnie D. Bergloff, his wife			
22) 3-115-4	Lucas B. Oliver	730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single	Great Lakes Energy Partners, LLC Cheapeake Appalachia, LLC SWN Production Company, LLC	12.50%	777/589 808/521 883/515
		730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single			
		730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single			
23) 3-115-4-6	Jacob S. McCarling	730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single	Great Lakes Energy Partners, LLC Cheapeake Appalachia, LLC SWN Production Company, LLC	12.50%	777/589 808/521 883/515
		730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single			
		730045-000	Lucas B. Oliver, married, and Jeffrey W. McCarling, Attorney-in-lact for Jacob S. Oliver McCarling, single			
24) 3-115-3	Benjamin Robert Moore and Heidi Lee Moore	74155-00-000	Benjamin Robert Moore, single, and Heidi Lee Moore, single	TH Exploration, LLC SWN Production Company	18.00%	881/584 908/526
		74155-00-000	Benjamin Robert Moore, single, and Heidi Lee Moore, single			
		74155-00-000	Benjamin Robert Moore, single, and Heidi Lee Moore, single			
25) 3-110-4-2	Karen Lynn Briggs and Henry William Briggs	735800-000	Karen L. Briggs, a married woman dealing in her sole and separate property	Cheapeake Appalachia, LLC SWN Production Company, LLC	18.00%	832/191 885/105

RECEIVED
 Office of Oil and Gas
 JAN 4 2018
 Department of Environmental Protection

January 2, 2018

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

RE: SWN's proposed New Well: William Rodgers OHI 6H in Ohio County, West Virginia, Drilling under I-70, Rogers Roads, Stoolfire W Alexander Road, Bear Back Road, and National 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 I-70, Rogers Roads, Stoolfire W Alexander Road, Bear Back Road, and National 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,



Robert Walter
Staff Landman
SWN Production Company, LLC
PO Box 12359
Spring, TX 77391-2359

RECEIVED
Office of Oil and Gas
JAN 4 2018
WV Department of
Environmental Protection

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

WW-6AC
(1/12)

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

Date of Notice Certification: 11/2/18

API No. 47- 69 -
Operator's Well No. William Rodgers OHI 6H
Well Pad Name: William Rodgers OHI Pad

Notice has been given:

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

State:	<u>WV</u>	UTM NAD 83	Easting:	<u>539865.644</u>
County:	<u>69- Ohio</u>		Northing:	<u>4439713.375</u>
District:	<u>3- Liberty</u>	Public Road Access:		<u>Rt. 40</u>
Quadrangle:	<u>648- Valley Grove</u>	Generally used farm name:		<u>William Rodgers</u>
Watershed:	<u>Upper Ohio South</u>			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

- 1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
- 2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
- 3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
- 4. NOTICE OF PLANNED OPERATION
- 5. PUBLIC NOTICE
- 6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

RECEIVED/ NOT REQUIRED

RECEIVED

RECEIVED/ NOT REQUIRED

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Office of Oil and Gas
JAN 4 2018
WV Department of Environmental Protection

Required Attachments:

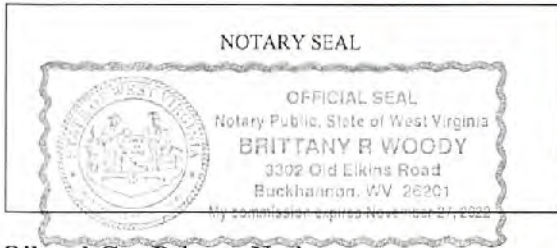
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

WW-6AC
(1/12)

Certification of Notice is hereby given:

THEREFORE, I _____, 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>Dee Southall</u>		<u>Jane Lew, WV</u>
Its:	<u>Senior Regulatory Analyst</u>	Facsimile:	<u>304-471-2497</u>
Telephone:	<u>832-796-1614</u>	Email:	<u>Dee_Southall@swn.com</u>



Subscribed and sworn before me this 25th day of October 2017.

Brittany R Woody Notary Public

My Commission Expires 11/27/22

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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Environmental Protection

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

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

Date of Notice: 1/21/18 Date Permit Application Filed: 1/21/18

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: William I. Rodgers & Douglas W. Rodgers
 Address: 94 McCoy Road
Valley Grove, WV 26080
 Name: _____
 Address: _____

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

COAL OPERATOR
 Name: _____
 Address: _____

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

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: *** See Attachment #1
 Address: _____

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

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

*Please attach additional forms if necessary

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 Environmental Protection

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WW-6A
(8-13)

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Office of Oil and Gas

API NO. 47- 69
OPERATOR WELL NO. William Rodgers OHI 6H
Well Pad Name: William Rodgers OHI Pad

JAN 4 2018

Notice is hereby given:

WV Department of
Environmental Protection

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

04/27/2018

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: Office of Oil & Gas

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

JAN 4 2010

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.**

04/27/2018

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

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WW-6A
(8-13)

API NO. 47-60-4706900267
OPERATOR WELL NO. William Rodgers OHI 6H
Well Pad Name: William Rodgers OHI Pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC
Telephone: 304-884-1613
Email: Dee_Southall@swn.com

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile: 304-884-1690

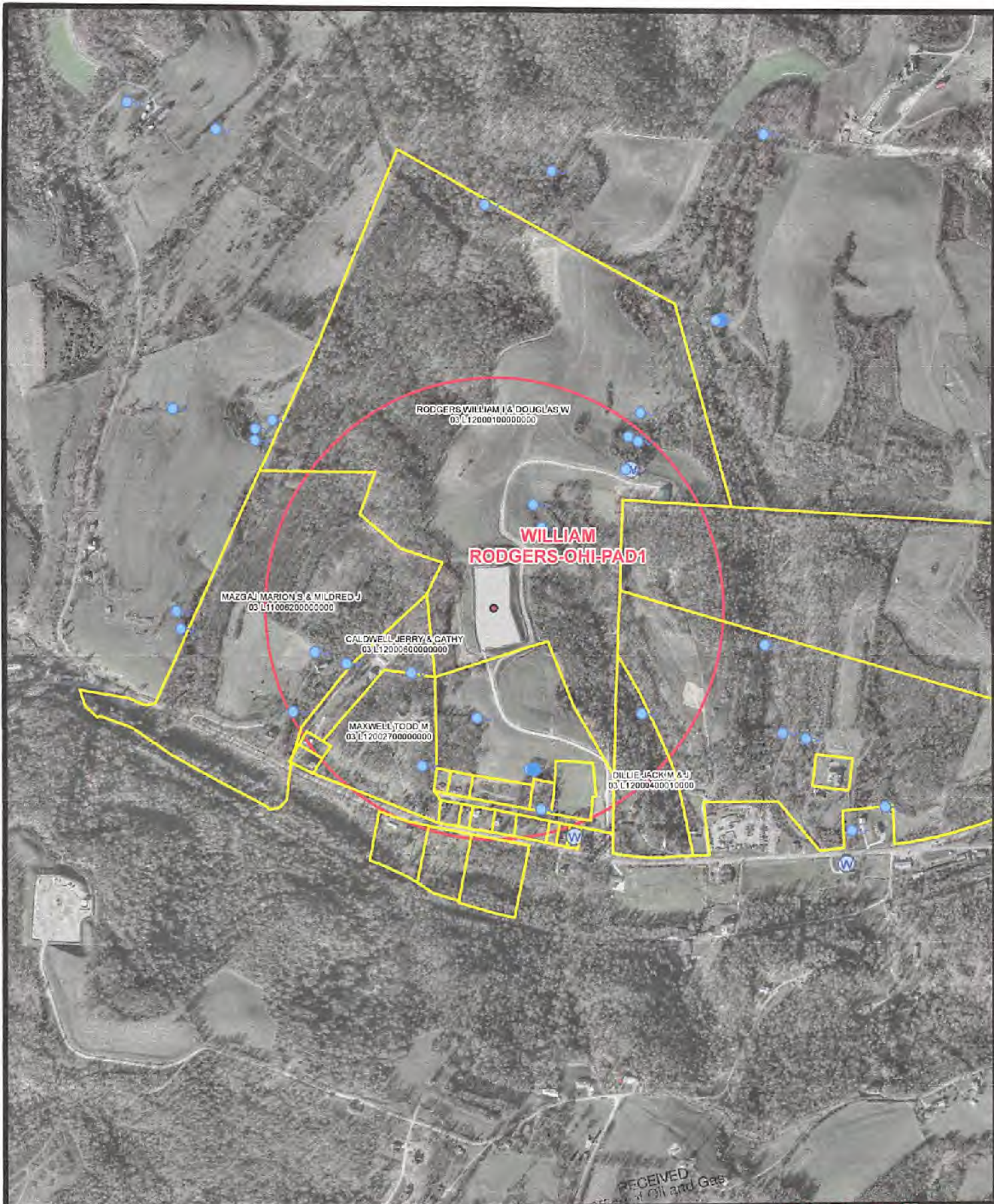
Oil and Gas Privacy Notice:


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.

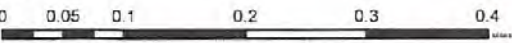


Subscribed and sworn before me this 8th day of November 2017
Brittany R Woody Notary Public
My Commission Expires 11/27/22





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WV Department of
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04/27/2018




 1 in = 833 ft



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

-  Spring
-  Water Well
-  Pond
-  1500 Buffer

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 State of Ohio
 Department of Oil and Gas

JAN 4 2018
 WV Department of
 Environmental Protection

Water Purveyor Map
 Well Pad: William Rodgers
 County: OH


 Southwestern Energy

04/27/2018

Date: 11/14/2017 | Author: willisb

William Rodgers Pad 13A

OWNER	ADDRESS	ZIP	STATE	MAILING ADDRESS	CITY STATE ZIP	WATER SOURCES
RODGERS WILLIAM I &	0	26060	WV	94 MCCOY RD	VALLEY GROVE WV 26060	10
MAXWELL TODD M	13889 NATIONAL Rd	26060	WV	11149 NATIONAL RD	VALLEY GROVE WV 26060	1
MAZGAJ MARION S & MILDRED J	13695 STEWARTS Ter	26060	WV	PO BOX 206	VALLEY GROVE WV 26060	3
CALDWELL JERRY & CATHY	13729 STEWARTS Ter	26060	WV	PO BOX 81	VALLEY GROVE WV 26060	1
DILLIE JACK M & J	14243 UNNAMED	26060	WV	PO BOX 4	VALLEY GROVE WV 26060	1

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04/27/2018

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: 06/09/2017 **Date Permit Application Filed:** 11/15

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: William I. Rodgers & Douglas W. Rodgers
Address: 94 McCoy Rd.
Valley Grove, WV 26060

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: 539,865.644
County: Ohio Northing: 4,439,713.375
District: Liberty Public Road Access: National Rd.
Quadrangle: Valley Grove Generally used farm name: William Rodgers OHI
Watershed: Upper Ohio South

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: 304-884-1891

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: 304-884-1891

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
JAN 4 2018
04/27/2018
WV Department of
Environmental Protection

WW-6A5
(1/12)

Operator Well No. William Rodgers OH16H

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: 06/08/2017 **Date Permit Application Filed:** 1/2/18

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: William I. Rodgers & Douglas W. Rodgers Name: _____
Address: 94 McCoy Rd. Address: _____
Valley Grove, WV 26060 _____

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	Eastings:	<u>539,865.644</u>
County:	<u>Ohio</u>		Northings:	<u>4,439,713.375</u>
District:	<u>Liberty</u>	Public Road Access:	<u>National Rd.</u>	
Quadrangle:	<u>Valley Grove</u>	Generally used farm name:	<u>William Rodgers OH1</u>	
Watershed:	<u>Upper Ohio South</u>			

This Notice Shall Include:

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

Well Operator:	<u>SWN Production Company, LLC</u>	Address:	<u>PO Box 1300, 179 Innovation Drive</u>
Telephone:	<u>304-517-6503</u>		<u>Jane Lew, WV 26378</u>
Email:	<u>Michael_Yates@swn.com</u>	Facsimile:	<u>304-864-1691</u>

Oil and Gas Privacy Notice:

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

RECEIVED
Office of Oil and Gas

JAN 4 2018

WV Department of
Environmental Protection **04/27/2018**



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

June 8, 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 William Rodgers Pad, Ohio County
 William Rodgers OHI 6H

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2011-0443 for the subject site to Southwestern Energy for access to the State Road for the well site located off of US 40 F in Ohio County.

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.

Very Truly Yours,

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

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

File

RECEIVED
 Office of Oil and Gas

JAN 4 2018

WV Department of
 Environmental Protection
 04/27/2018

FRAC ADDITIVES			
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

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Office of Oil and Gas

JAN 4 2018

WV Department of
Environmental Protection
01/03/2018

4706900267



● SITE LOCATION

WEST VIRGINIA COUNTY MAP

LIBERTY DISTRICT, OHIO COUNTY,
WEST VIRGINIA
SCALE: N.T.S.

PROJECT CONTACTS

SOUTHWESTERN ENERGY

Tom Chambers - Facilities Engineer
501-548-3753

John Anguilla, Field Regulatory Specialist
304-884-1644

Jimmy Johnson, Construction Superintendent
304-997-9403

ENGINEER & SURVEYOR

Anthony Baumgard, PE
Triple H Enterprises
304-873-3260

Darrell Boice, PS
Triple H Enterprises
304-873-3260



ANTHONY BAUMGARD, P.E. NO. WV 14049

MDS Utility of West Virginia
1-800-245-6444
West Virginia State Law
Division XXV, Chapter 54-C7
Requires that you call two business days before you dig in
the state of West Virginia.
IT'S THE LAW!!!



**WILLIAM RODGERS OHI PAD 'A' AS-BUILT
AS-BUILT/PRODUCTION PLAN
LIBERTY DISTRICT, OHIO COUNTY, WV
SEPTEMBER 2015**

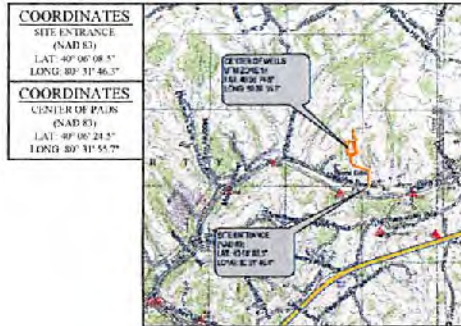
(UNIVERSAL TRANSVERSE MERCATOR COORDINATE SYSTEM (UTM) ZONE 17
ELEVATIONS BASED ON WGS84
ESTABLISHED BY SURVEY / GRAVITY GPS & LEVEL
POST-PROCESSING)



DRAWING INDEX

- 01 - COVER SHEET
- 02 - OVERALL
- 03 - SHEET 1
- 04 - SHEET 2
- 05 - ACCESS ROAD PROFILE SHEET
- 06 - DETAIL SHEET

USGS VALLEY GROVE, WV QUAD MAP

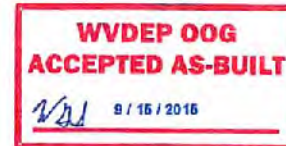


COORDINATES
SITE ENTRANCE
(NAD 83)
LAT: 39° 00' 08.5"
LONG: 80° 31' 46.3"

COORDINATES
CENTER OF PAIN
(NAD 83)
LAT: 39° 00' 21.5"
LONG: 80° 31' 55.7"

WELL INFORMATION

WELL NO.	API NUMBER	WELL NO.	API NUMBER
3H	069-00064		
8H	069-00065		
209H	069-00162		



LIBERTY DISTRICT, OHIO COUNTY,
WEST VIRGINIA

WVDOH COUNTY ROAD MAP
● PROJECT LOCATION
SCALE: N.T.S.

AS-BUILT CERTIFICATION:
THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCES TO ANY MAPS ATTACHED HERE TO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, AND GAS CES 45-R.

NOTES:

1. THE AS-BUILT INFORMATION SHOWN HEREON REFLECTS FIELD DATA COLLECTED RELATING TO THE FINAL GRADINGS OF THE TEST WELL AREA AS OF SEPTEMBER 11, 2015. TRIPLE H ENTERPRISES IS NOT RESPONSIBLE FOR ANY CHANGES MADE TO THE SITE AFTER THE ABOVE MENTIONED DATE.
2. THE EXISTING CONTAINMENT BERM AROUND THE WELL PAD SHALL BE REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.
3. THE EXISTING BARRIERS TO THE WELL PAD SHALL HAVE THE APPROPRIATE TERMS REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.

REVISION:
02/17/2016

DATE:
09/16/2015



OVERALL DRAWING SHEET
AS-BUILT/PRODUCTION PLAN
WILLIAM RODGERS OHI WELL PAD 'A' AS-BUILT
LIBERTY DISTRICT, OHIO COUNTY,
WEST VIRGINIA

JOB: 8W-00220
DATE: 09/16/2015
DRAWN BY: ADS
SCALE: AS SHOWN
SHEET: 1 OF 6

DWG

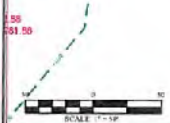
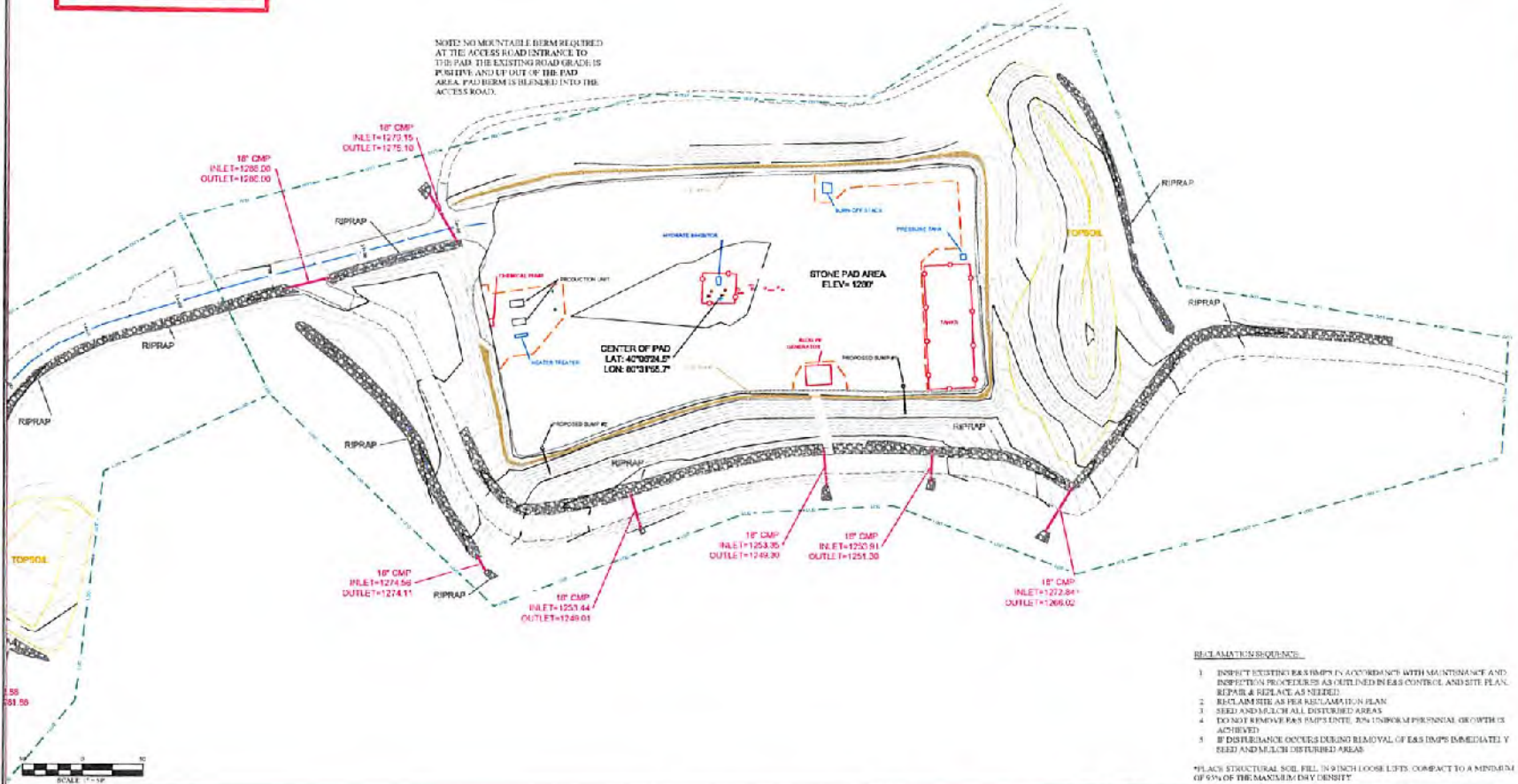
4706900267

**WVDEP OOG
ACCEPTED AS-BUILT**

VBJ 9/16/2016



NOTE: NO MOUNTABLE BERM REQUIRED AT THE ACCESS ROAD ENTRANCE TO THE PAD. THE EXISTING ROAD GRADE IS POSITIVE AND UP OUT OF THE PAD AREA. PAD BERM IS BLENDED INTO THE ACCESS ROAD.



- RECLAMATION SEQUENCE:**
1. INSPECT EXISTING RIPRAP'S CONDITION WITH MAINTENANCE AND INSPECTOR RECORDERS AS OUTLINED IN EES CONTROL AND SITE PLAN. REPAIR & REPLACE AS NEEDED.
 2. RECLAIM SITE AS PER RECLAMATION PLAN.
 3. SEED AND MULCH ALL DISTURBED AREAS.
 4. DO NOT REMOVE PAST PASTURE. ONLY UNBROKEN PERSONAL GROWTH IS ALLOWED.
 5. IF DISTURBANCE OCCURS DURING REMOVAL OF EAS IMPS IMMEDIATELY SEED AND MULCH DISTURBED AREAS.
- *PLACE STRUCTURAL SOIL FILL IN 8 INCH LOOSE LOTS COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY.

- NOTES:**
1. THE EXISTING CONTAINMENT BERM AROUND THE WELL PAD SHALL BE REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.
 2. THE EXISTING BARRIERS TO THE WELL PAD SHALL HAVE THE MOUNTABLE BERM REPAIRED AS NECESSARY TO ENSURE 100% CONTAINMENT OF ALL FLUIDS PRIOR TO DRILLING OPERATIONS.

LEGEND

- AS-BUILT 2' CONTOURS	- LINES OF DISTURBANCE
- AS-BUILT 10' CONTOURS	- SILT SOCK
- CHAINLINK FENCE	- SAND TRAP
- PRODUCTION AREA	- PROPOSED WELL
- EXISTING GRAVEL	- EXISTING WELL
- EXISTING ACCESS ROAD CENTER LINE	- EXISTING PAD BERM
- EXISTING DITCH	

WELL INFORMATION

WELL NO.	API NUMBER	WELL NO.	API NUMBER
3H	059-00094		
8H	076-00095		
20SH	069-00192		



DATE: _____

REVISION: _____

SWN
Sustainable Well Construction
The Well Construction Experts

SHEET 2

ROBERT BONEBRAKE WELL PAD
ROBERT BONEBRAKE WELL PAD AS-BUILT
BUFFALO COUNTY, WEST VIRGINIA

JOB: SWN0000
DATE: 09/14/2015
DRAWN BY: JDS
SCALE: AS SHOWN
SHEET: 2 OF 6