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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, January 2, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for BARRY GREATHOUSE A BRK 26  
47-009-00232-00-00

**Lateral Extension**

SWN PRODUCTION COMPANY, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the typed name and title.

Operator's Well Number: BARRY GREATHOUSE A BRK 206H  
Farm Name: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE  
U.S. WELL NUMBER: 47-009-00232-00-00  
Horizontal 6A New Drill  
Date Modification Issued: January 2, 2019

Promoting a healthy environment.

October 10, 2018

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

**RE:** Modifications: Barry Greathouse A BRK 6H, Barry Greathouse A BRK 8H, & Barry Greathouse A BRK 206H

Dear Ms. Adkins

Enclosed please find the updated 6B, WBD, Mylar, 6A1, & Road letter for the above captioned wells. We are extending the laterals. These wells are situated on the Greathouse's property in Brooke County, West Virginia.

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

Thank you.

Sincerely,

*Brittany Woody*

Brittany Woody  
Regulatory Analyst  
Southwestern Energy Production Company, LLC

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WV Department of  
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4700900232  
01/04/2019

WW-6B  
(04/15)

API NO. 47-09  
OPERATOR WELL NO. Barry Greathouse A BRK 206H  
Well Pad Name: Barry Greathouse A BRK PAD

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 Buffalo Bethany  
Operator ID County District Quadrangle

2) Operator's Well Number: Barry Greathouse A BRK 206H Well Pad Name: Barry Greathouse A BRK PAD

3) Farm Name/Surface Owner: Barry L. & Patricia A. Greathouse Public Road Access: Gritty Run

4) Elevation, current ground: 1136' Elevation, proposed post-construction: 1136'

5) Well Type (a) Gas X Oil Underground Storage  
Other  
(b) If Gas Shallow X Deep  
Horizontal X

6) Existing Pad: Yes or No Yes

*C. J. B. 10.3.18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation- Marcellus, Down-Dip well to the South BHL Target Top TVD- 5885', Target Base TVD- 5926', Anticipated Thickness- 41', Associated Pressure- 3852

8) Proposed Total Vertical Depth: 5915'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17439'

11) Proposed Horizontal Leg Length: 11212.52'

12) Approximate Fresh Water Strata Depths: 275'

13) Method to Determine Fresh Water Depths: salinity profile

14) Approximate Saltwater Depths: 384' salinity profile

15) Approximate Coal Seam Depths: 292'

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

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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:

WW-6B  
(04/15)

API NO. 47- 09 -  
OPERATOR WELL NO. Barry Greathouse A BRK 206H  
Well Pad Name: Barry Greathouse A BRK PAD

18)

**CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	375'	375'	371 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	1617'	1617'	630 sx/CTS
Production	5 1/2"	New	HCP-110	20#	17439'	17439'	Lead 774sx tail 2741sx/100' inside interval
Tubing							
Liners							

*C. M. O. 10-3-18*

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	See	Surface	Casing				
Intermediate	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/50% Excess
Tubing							
Liners							

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**PACKERS**

Kind:				
Sizes:				
Depths Set:				

WW-6B  
(10/14)

API NO. 47- 09 - \_\_\_\_\_  
OPERATOR WELL NO. Bary Greathouse A BRK 206H  
Well Pad Name: Bary Greathouse A BRK PAD

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

Drill and stimulate any potential zones between and including the Benson to Marcellus. \*\*If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface. Run casing not less than 20' below void nor more than 50' 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 unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 80 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 7.8

22) Area to be disturbed for well pad only, less access road (acres): 7.0

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

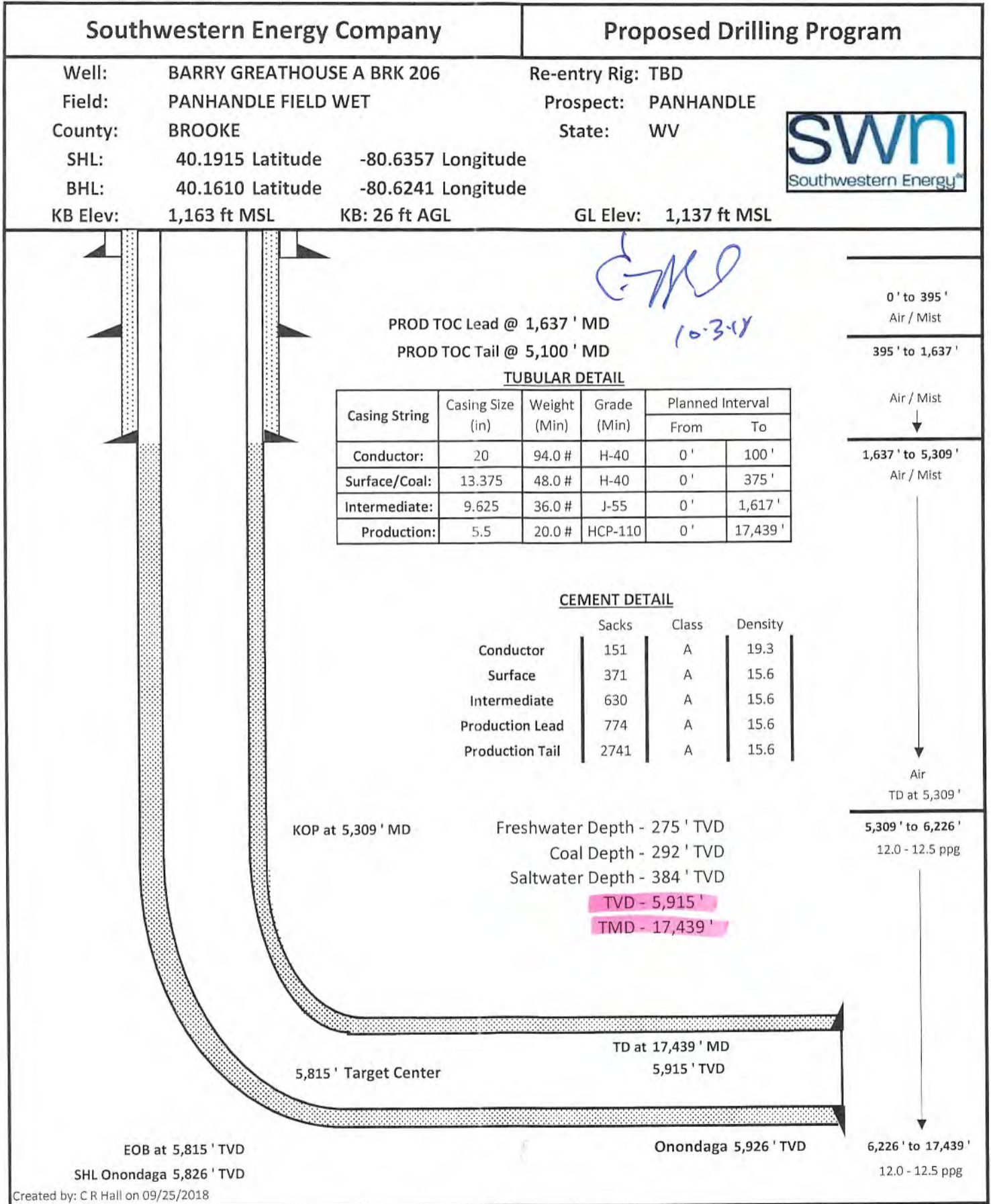
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25) Proposed borehole conditioning procedures:

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

\*Note: Attach additional sheets as needed.

01/04/2019

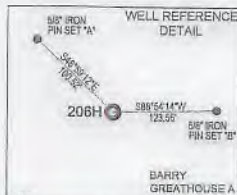


(2000' SCALE) SURFACE HOLE LATITUDE 40°12'30" 2924'

(2000' SCALE) BOTTOM HOLE LATITUDE 40°10'00" 11374'



www.jhacompanies.com  
68011 Vineyard Road  
St. Clairsville, Ohio 43950  
740-695-6100

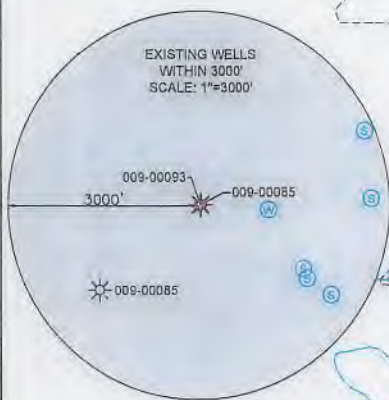
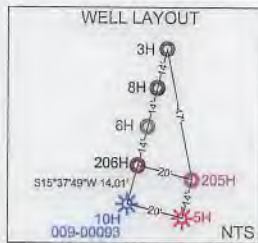


NOTES ON SURVEY

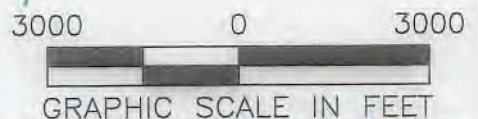
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TRIBUTARY STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

01/04/2019

GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US



<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4449075.14 EASTING: 531013.75
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4448883.35 EASTING: 530792.49
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445693.05 EASTING: 532014.41



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. 2041

**SWN SWN**  
Production Company, LLC Production Company™

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	BARRY GREATHOUSE A BRK
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF ELEVATION: GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: 206H
		API WELL #:	47 STATE 009 COUNTY 00232 PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1136.0'

DISTRICT: BUFFALO COUNTY: BROOKE QUADRANGLE: TILTONSVILLE, OH & BETHANY, WV

SURFACE OWNER: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE ACREAGE: ±229.00

OIL & GAS ROYALTY OWNER: RAYLE COAL COMPANY ACREAGE: ±229.00

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: 5,915' TVD 17,439.2' 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

<b>LEGEND:</b>	<b>REVISIONS:</b>	<b>DATE:</b> 09-28-2018
<ul style="list-style-type: none"> <li>○ PROPOSED SURFACE HOLE / BOTTOM HOLE</li> <li>⊙ EXISTING / PRODUCING WELLHEAD</li> <li>LPL: LANDING POINT LOCATION</li> <li>⊙ EXISTING WATER WELL</li> <li>⊙ EXISTING SPRING</li> <li>— SURVEYED BOUNDARY</li> <li>— DRILLING UNIT</li> <li>----- LEASE BOUNDARY</li> <li>— PROPOSED PATH</li> </ul>		<b>DRAWN BY:</b> D. REED <b>SCALE:</b> 1" = 3000' <b>DRAWING NO:</b> 2017-422 <b>WELL LOCATION PLAT</b>

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE (S) RAYLE COAL COMPANY (R)	03-B41-0082.0000
TRACT	SURFACE OWNER	TAX PARCEL
2	DANNY GENE BRITT & VIRGINIA MARGARET BRITT	03-B46-0027.0000
3	TRACY GILBERT	03-B46-0022.0000
4	BUSTER T. BLAKE & BARBARA A. BLAKE	03-B46-0023.0000
5	GARY L. WILLIAMS & MARGIE WILLIAMS	03-B46-0025.0000
6	MY THREE SONS HOLDING LP.	03-B46-0024.0000
7	GARY HERCULES & MARTHA HERCULES	04-R6-4
8	GARY & MARTHA HERCULES	04-R6-4.1
9	SHORT CREEK COAL CO	04-R6-17.3
10	SHORT CREEK COAL CO	04-R6-17.4
11	WINDELL H. & G. GOFF	04-R6-27.1

01/04/2019

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	ROBERT J. MILLER JR. & LINDA MILLER	03-B41-0047.0000
B	JAY GLEN COLLINS	03-B41-0080.0000
C	DALE T. WOOD & MARY R. WOOD	03-B41-0084.0000
D	JAMES B. GEBHARDT & MELISSA D. GEBHARDT	03-B46-0029.0000
E	RACHAEL R. BAXTER	03-B46-0028.0000
F	GRACE FRIEND	03-B46-0030.0000
G	REBECCA FRIEND	03-B46-0026.0000
H	TERRY L. CRUPE	03-B46-0033.0000
I	ALFRED SCHELL	03-B46-0037.0000
J	MELISSA KERNS, CHRISTINA A. KERNS, TIMOTHY E. KERNS & JEANETTE M. KERNS	03-B46-0040.0001
K	TIMOTHY E. KERNS & JEANETTE M. KERNS	04-R6-8.1
L	MELISSA ANN KERNS	04-R6-8
M	ULRICH UTT	04-R6-24.1
N	ULRICH UTT	04-R6-24.2
O	GARY & MARTHA HERCULES	04-R6-6.1
P	GARY & MARTHA HERCULES	04-R6-5
Q	GARY & MARTHA HERCULES	04-R6-6
R	GARY WAYNE HERCULES	04-R6-16
S	WINDSOR COAL COMPANY C/O CNX LAND-PROPERTY TAX	04-R6-12
T	WAYNE E SHOOK	04-R6-15
U	CHARLES B. DAVIS, III & ELIZABETH MARIE DAVIS	04-R6-14.4
V	RANDALL L. CRABTREE & CYNTHIA S. KOVALSKI	04-R6-27.3
W	NICOLE L. CARENBAUER	04-R6-28.6
X	WINDELL H. GOFF, II & GLADYS GOFF	04-R6-24.3
Y	STELLA M. BRYAN & KATHLEEN J. BRYAN	04-R6-17.1
Z	WINDSOR COAL COMPANY C/O CNX LAND-PROPERTY TAX	04-R6-25
AA	RICHARD A. WOOD, JR.	04-R6-24.6
AB	SHORT CREEK COAL COMPANY C/O RAYLE COAL COMPANY	04-R6-17
AC	SHORT CREEK COAL COMPANY C/O RAYLE COAL COMPANY	04-R6-17.2
AD	OHIO COUNTY BOARD OF COMMISSIONERS	04-R5-55
AE	WINDSOR COAL COMPANY C/O CNX LAND-PROPERTY TAX	04-R6-25
AF	BRUCE D. BONAR (3) & WILLIAM BONAR (4)	03-B46-0020.0000
AG	TRACY GILBERT	03-B46-0023.0001
AH	TRACY GILBERT	03-B46-0022.0001
AI	OHIO COUNTY BOARD OF COMMISSIONERS	04-R5-10
AJ	STACY ANN GREATHOUSE & PATRICIA ANN GREATHOUSE	03-B46-0041.0000
AK	BARRY L. GREATHOUSE & PATRICIA ANN GREATHOUSE	03-B41-0083.0000
AL	BARRY L. GREATHOUSE & PATRICIA ANN GREATHOUSE	03-B41-0032.0000

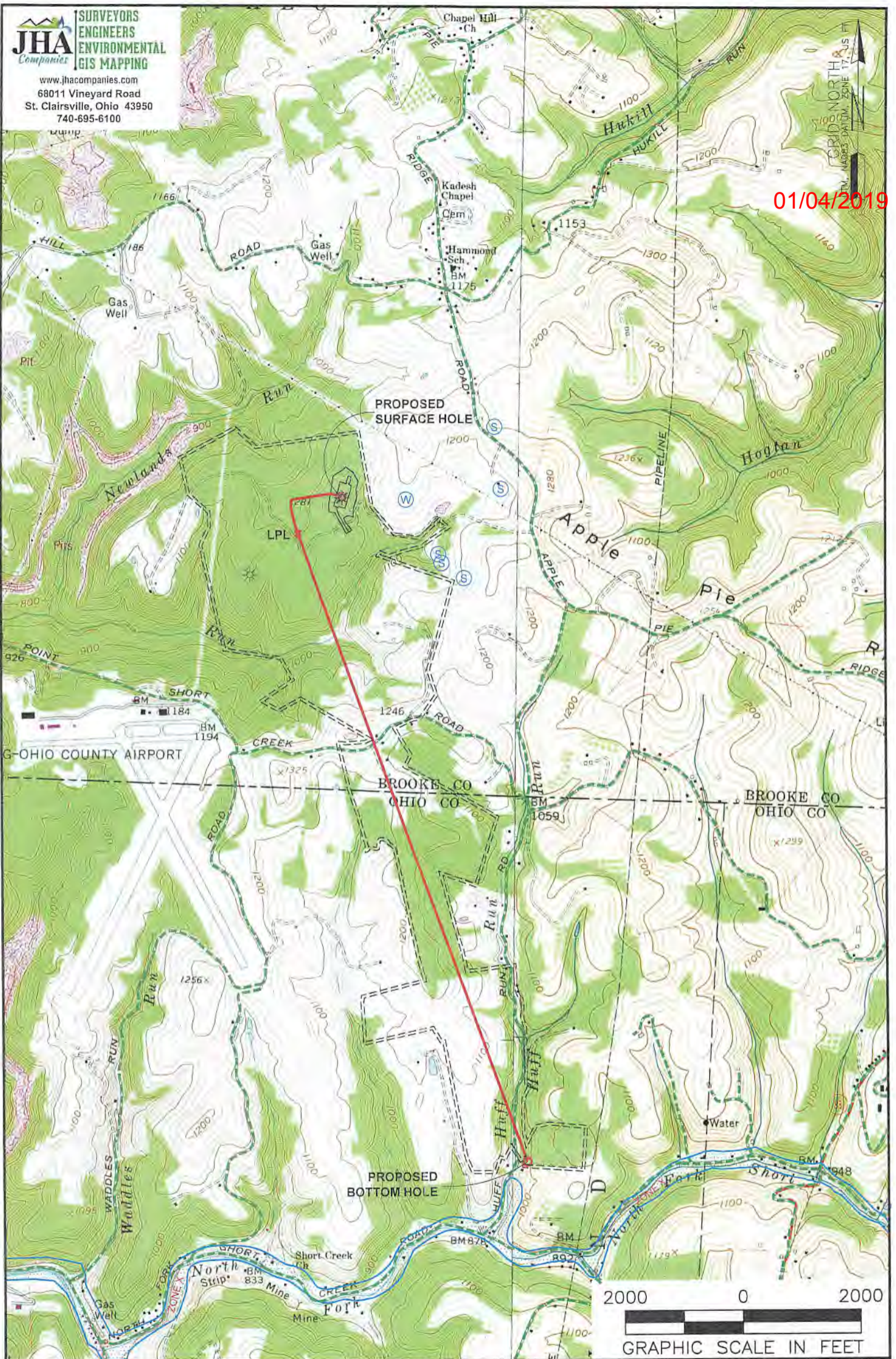
REVISIONS:	COMPANY:	 	
	OPERATOR'S	BARRY GREATHOUSE A BRK	DATE: 09-28-2018
	WELL #:	206H	DRAWN BY: D. REED
	DISTRICT:	BUFFALO	SCALE: N/A
	COUNTY:	BROOKE	DRAWING NO: 2017-422
	STATE:	WV	WELL LOCATION PLAT

PROPERTY NUMBER 2501166084  
PAD ID 3001156331

47-001-00232



01/04/2019



**NOTES ON SURVEY**

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

**LEGEND:**

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

WELL OPERATOR:  
SWN PRODUCTION COMPANY, LLC

ADDRESS:  
P.O. BOX 1300 JANE LEW, WV 26378

SURFACE OWNER:  
BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE

WELL (FARM) NAME:  
BARRY GREATHOUSE A BRK

COUNTY - CODE  
BROOKE - 009

USGS 7 1/2 QUADRANGLE MAP NAME  
TILTONVILLE, OH-WV & BETHANY, WV-PA

WELL # SERIAL #  
206H XXXX

DISTRICT;  
BUFFALO

Barry Greathouse A  
BRK 206H

WW-6A1  
(5/13)

Operator's Well No. \_\_\_\_\_

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

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

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

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

See Exhibit A

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

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

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

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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.

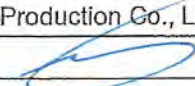
Well Operator: SWN Production Co., LLC  
 By:  Gary Nuckolls  
 Its: Staff Landman

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  
 Barry Greathouse A BRK 206H  
 Brooke County, West Virginia

#	TMP	SURFACE OWNER	LESSOR	LESSEE	ROYALTY	BK/PG
1)	03-0B41-0082-0000-0000	Barry L. Greathouse and Patricia A. Greathouse	Rayle Coal Company	Chesapeake Appalachia, LLC	15.50%	26/649
				Range Resources-Appalachia LLC		20/733
				Chesapeake Appalachia, LLC		10/552
				SWN Production Company, LLC		32/384
2)	03-0B46-0027-0000-0000	Danny Gene Britt and Virginia Margaret Britt	Danny Gene Britt and Virginia Margaret Britt	Great Lakes Energy Partners, LLC	12.50%	10/109
				Range Resources-Appalachia LLC		20/733
				Chesapeake Appalachia, LLC		10/552
				SWN Production Company, LLC		30/480
3)	03-0B46-0022-0000-0000	Tracy Gilbert	Tracy Gilbert	Great Lakes Energy Partners, LLC	12.50%	10/52
				Range Resources-Appalachia LLC		20/733
				Chesapeake Appalachia, LLC		10/552
				SWN Production Company, LLC		30/480
4)	03-0B46-0023-0000-0000	Buster T. Blake and Barbara A. Blake	Buster T. Blake and Barbara A. Blake	Chesapeake Appalachia, LLC	18.00%	19/147
				SWN Production Company, LLC		30/480
5)	03-0B46-0025-0000-0000	Gary L. Williams and Margie Williams	Gary L. Williams and Margie Williams	Chesapeake Appalachia, LLC	18.00%	15/296
				SWN Production Company, LLC		30/480
6)	03-0B46-0024-0000-0000	My Three Sons Holdings, LP	David Brandimarte	Chesapeake Appalachia, LLC	18.00%	23/516
				SWN Production Company, LLC		30/480
			Gregory Brandimarte and Susan Brandimarte	Chesapeake Appalachia, LLC	18.00%	23/511
				SWN Production Company, LLC	30/480	
			Josephine Jordan	Chesapeake Appalachia, LLC	18.00%	22/166
				SWN Production Company, LLC	30/480	
			Patrick Villinger and Teauna Villinger	Chesapeake Appalachia, LLC	18.00%	23/625
				SWN Production Company, LLC	30/480	
			Brandt Price and Linda Price	Chesapeake Appalachia, LLC	18.00%	23/212
				SWN Production Company, LLC	30/480	
Brian Mokricky and Myra Mockricky	03-0B46-0024-0000-0000	My Three Sons Holdings, LP		Chesapeake Appalachia, LLC	18.00%	24/684
				SWN Production Company, LLC		30/480
Anna Wilson	03-0B46-0024-0000-0000	My Three Sons Holdings, LP		Chesapeake Appalachia, LLC	18.00%	25/367
				SWN Production Company, LLC		30/480
Donna Yost	03-0B46-0024-0000-0000	My Three Sons Holdings, LP		Chesapeake Appalachia, LLC	18.00%	22/161
				SWN Production Company, LLC		30/480
Marie P. Fisher and Lulu Fisher	03-0B46-0024-0000-0000	My Three Sons Holdings, LP		Great Lake Energy Partners, LLC	15.50%	9/637

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4700900232

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  
 Barry Greathouse A BRK 206H  
 Brooke County, West Virginia

				Range Resources-Appalachia, LLC		20/733
				Chesapeake Appalachia, LLC		10/552
				SWN Production Company, LLC		30/480
7)	04-OR06-0004-0000-0000	Gary Hercules and Martha Hercules	Gary Hercules and Martha Hercules	SWN Production Company, LLC	16.00%	926/147
8)	04-OR06-0004-0001-0000	Gary Hercules and Martha Hercules	Gary Hercules and Martha Hercules	SWN Production Company, LLC	16.00%	926/147
9)	04-OR06-0017-0003-0000	Rayle Coal Company	Rayle Coal Company	Chesapeake Appalachia, LLC	18.00%	808/334
				SWN Production Company, LLC		883/403
10)	04-R06-0017-0004-0000	Rayle Coal Company	Rayle Coal Company	Chesapeake Appalachia, LLC	18.00%	808/335
				SWN Production Company, LLC		883/403
11)	04-R06-0027-0001-0000	Windell H. Goff, II and Gladys Goff	Windell H. Goff, II and Gladys Goff	Chesapeake Appalachia, LLC	18.00%	813/688
				SWN Production Company, LLC		884/421

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October 8, 2018

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

**RE:** SWN's proposed New Well: Barry Greathouse BRK 6H & Barry Greathouse A BRK 206H in Brooke County, West Virginia, Drilling under Gritys Point Road & Huffs Run 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 Gritys Point Road & Huffs Run Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

Thank you.

Sincerely,



Gary Nuckolls  
Staff Landman  
SWN Production Company, LLC  
PO Box 1300  
Jane Lew, WV 26378

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