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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)

Tuesday, February 26, 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  
47-009-00239-00-00

**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 205H  
Farm Name: BARRY L. GREATHOUSE & PATRICIA A. GREAT  
U.S. WELL NUMBER: 47-009-00239-00-00  
Horizontal 6A New Drill  
Date Modification Issued: February 26, 2019

Promoting a healthy environment.

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

03/01/2019

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 205H 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: 1137' Elevation, proposed post-construction: 1137'

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 Expected Pressure(s):  
Target Formation- Marcellus, Up-Dip Well to the North Target Top TVD- 5818' Target Base TVD- 5859', Anticipated Thickness- 41', Associated Pressure- 3808

8) Proposed Total Vertical Depth: 5848'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21576'

11) Proposed Horizontal Leg Length: 15212.65'

12) Approximate Fresh Water Strata Depths: 275'

13) Method to Determine Fresh Water Depths: Salinity Profile

14) Approximate Saltwater Depths: 384' Nearby Salinity Profile

15) Approximate Coal Seam Depths: 292'

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**

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	H-40	48#	375'	375'	370 sx/CTS
Coal	See	Surface	Casing				
Intermediate	7"	New	J-55	36#	1617'	1617'	626 sx/CTS
Production	5 1/2"	New	HCP-110	20#	21,576'	21,576'	Lead 812sx tall 3618sx100' inside int
Tubing							
Liners							

03/01/2019

*D-ME 10-3-18*

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
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							

**PACKERS**

Kind:				
Sizes:				
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. 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.)

03/01/2019

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 \*\*\*

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.

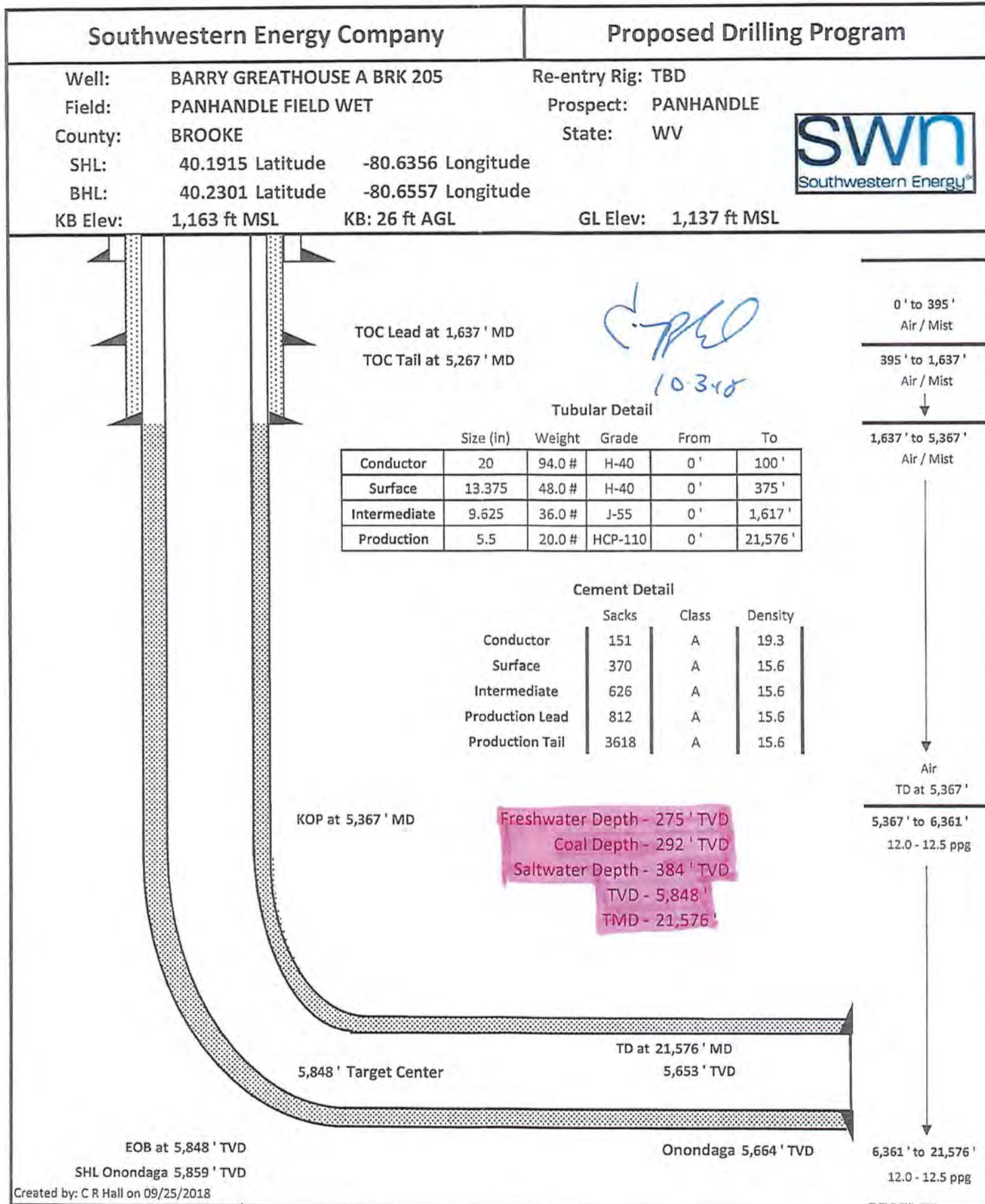
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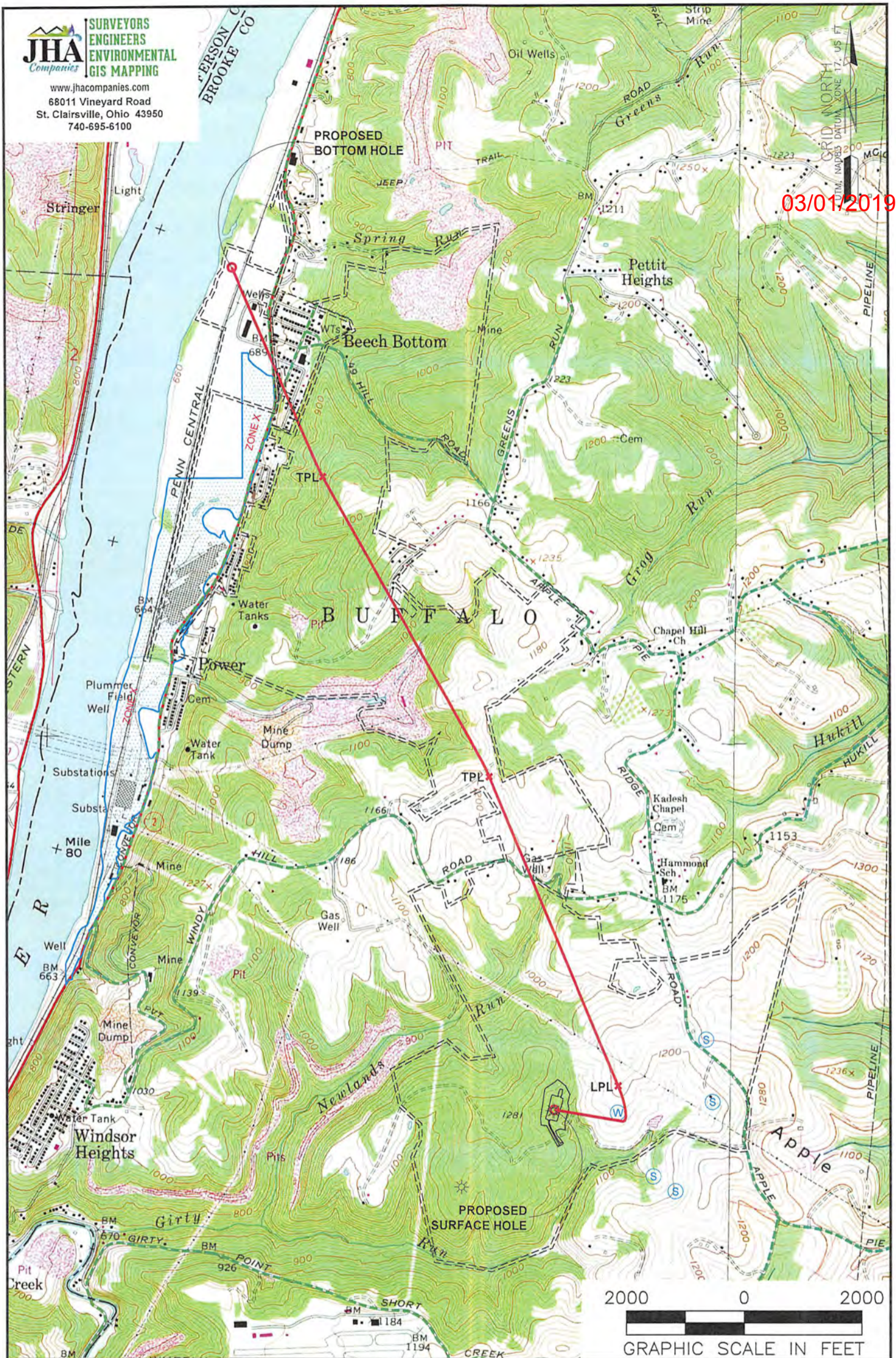
\*Note: Attach additional sheets as needed.

03/01/2019



Created by: C R Hall on 09/25/2018

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**FEB 22 2019**  
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03/01/2019

**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 PLAIN
- TPL\* TURNING POINT LOCATION
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: BARRY GREATHOUSE A BRK	WELL # 205H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY : BROOKE	CODE: 009	DISTRICT: BUFFALO
SURFACE OWNER: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE	USGS 7 1/2 QUADRANGLE MAP NAME: TILTONSVILLE, OH-WV		

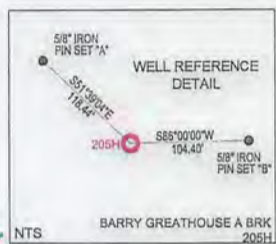
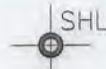


www.jhacompanies.com  
 68011 Vineyard Road  
 St. Clairsville, Ohio 43950  
 740-695-6100

<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4449073.74 EASTING: 531019.69
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4449201.10 EASTING: 531347.63
<b>TURNING POINT LOCATION (TPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4450766.30 EASTING: 530657.33
<b>TURNING POINT LOCATION (TPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4452285.75 EASTING: 529775.28
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4453348.49 EASTING: 529292.00

**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 TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

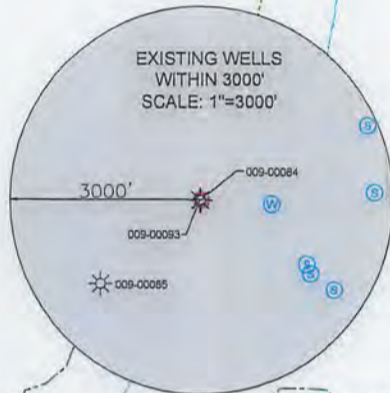


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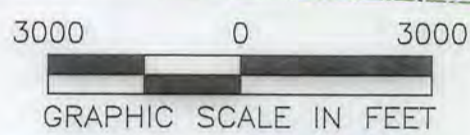
GRID NORTH  
 UTM, NAD83 DATUM, ZONE 17, US

PROPOSED BOTTOM HOLE

STATE OF OHIO  
 STATE OF WEST VIRGINIA



LINE	BEARING	DISTANCE
L1	S13°48'13"W	1125.88'
L2	N34°34'12"W	1101.37'



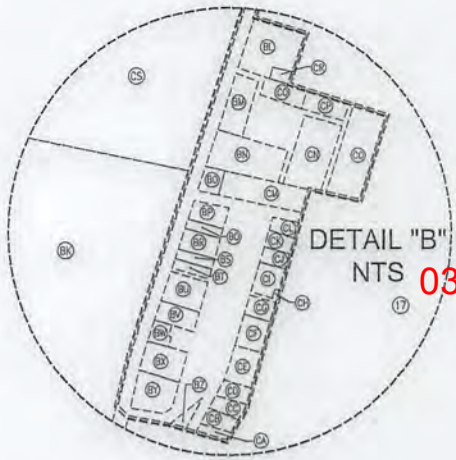
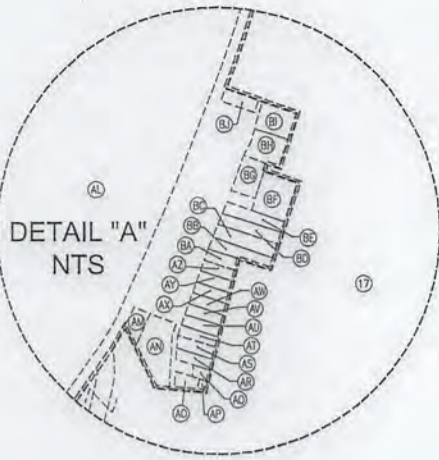
I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

*[Signature]* 10/8/18

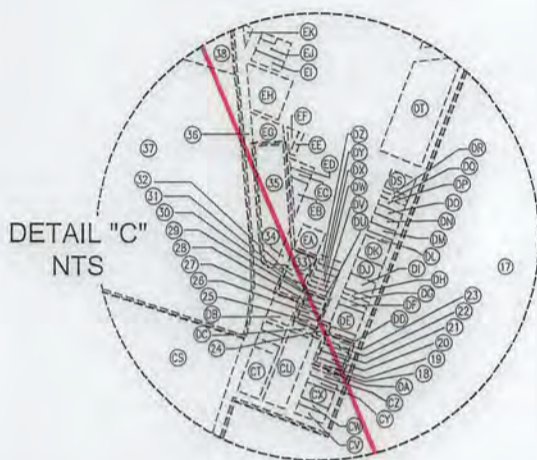
P.S. 2041

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

(+) 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)	BARRY GREATHOUSE A BRK OPERATOR'S WELL #: 205H API WELL #: 47 009 00239 STATE COUNTY PERMIT
	WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	WATERSHED: UPPER OHIO SOUTH DISTRICT: BUFFALO COUNTY: BROOKE SURFACE OWNER: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE OIL & GAS ROYALTY OWNER: RAYLE COAL COMPANY
DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY) _____ TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,848' TVD 21576.2' TMD	WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378	DESIGNATED AGENT: BRITTANY WOODY ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378
LEGEND: * PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION W EXISTING WATER WELL S EXISTING SPRING TPL * TURNING POINT LOCATION --- SURVEYED BOUNDARY --- DRILLING UNIT - - - - - LEASE BOUNDARY --- PROPOSED PATH	REVISIONS: DATE: 10-08-2018 DRAWN BY: D. REED SCALE: 1" = 3000' DRAWING NO: 2017-422 WELL LOCATION PLAT	





03/01/2019



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)	03-841-0082.0000
TRACT	SURFACE OWNER	TAX PARCEL
2	MARK & TRINA PROVENZANO	03-841-0090.0001
3	JAY GLEN COLLINS	03-841-0080.0000
4	WILLIAM & DAWNA MILLER	03-841-0061.0000
5	ERNEST & JOANN P. CAPP	03-841-0063.0000
5	ERNEST & JOANN P. CAPP	03-841-0064.0000
7	ERNEST & JOANN P. CAPP	03-841-0052.0000
8	WINDSOR POWER HOUSE COAL CO.	03-841-0049.0000
9	WINDSOR POWER HOUSE COAL CO.	03-836-0104.0000
10	WINDSOR POWER HOUSE COAL CO.	03-836-0103.0000
11	BROOKE COUNTY COMMISSION	03-836-0103.0001
12	WINDSOR POWER HOUSE COAL CO.	03-836-0101.0000
13	BRIAN D. & CASEY K. RICHARDSON	03-836L-0021.0001
14	CONNIE WAGNER	03-836L-0015.0000
15	AMANDA HUFF	03-836L-0017.0000
16	JEFFERY M. & KRISTINA L. BARR	03-836L-0011.0001
17	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0023.0001
18	RIGHT OF WAY	ROAD UNKNOWN
19	CAROLYN K. MOORE	01-836F-0070.0000
20	VALERIE GAIL & ROBERT LEE GRAY	01-836F-0069.0000
21	JEFFREY L. STOLLAR	01-836F-0068.0000
22	RIGHT OF WAY	ALLEY "T"
23	JUNE E. MORRELL	01-836F-0067.0000
24	RIGHT OF WAY	HILL STREET
25	JON SCOTT & LORETTA MULHOLLEN	01-836F-0028.0000
26	FRANK & TERISSA J. KVOCKA	01-836F-0029.0000
27	JUNE MORRELL	01-836F-0030.0000
28	CHERYL E. SMITH	01-836F-0031.0000
29	ROBERT HARRY & CONNIE FAY SADLER	01-836F-0032.0000
30	RIGHT OF WAY	ALLEY "K"
31	ARCH J. & VERA E. BARTZ (TRANSFER UPON DEATH)	01-836F-0020.0000
32	JUNE E. MORRELL	01-836F-0019.0000
33	JUNE E. MORRELL	01-836F-0018.0000
34	RIGHT OF WAY	HIGH STREET
35	JUNE E. MORRELL	01-836F-0001.0000
36	RIGHT OF WAY (W.V. STATE ROUTE #2)	RIVER ROAD
37	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0119.0000
38	BROWNLEE LAND VENTURES	01-836B-0115.0000
39	BROWNLEE LAND VENTURES	01-836B-0115.0003
40	VILLAGE OF BEECH BOTTOM	01-836B-0115.0004
41	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0024.0000
42	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0116.0000
43	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0126.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	DALE T. & MARY R. WOOD (SURV.)	03-841-0084.0000
B	DANNY GENE BRIT AND VIRGINIA MARGARET BRIT, JTWROS	03-846-0027.0000
C	BOARD OF COMMISSION OHIO COUNTY, WHEELING OHIO COUNTY AIRPORT AUTHORITY	04-R5-0001.0000
D	STACY ANNI GREATHOUSE & PATRICIA ANN GREATHOUSE, JTWROS	03-846-0041.0000
E	BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE	03-841-0083.0000
F	BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE	03-841-0032.0000
G	ROBERT J. JR AND LINDA MILLER	03-841-0047.0000
H	KARL DOUGLAS STEPHENS	03-841-0054.0002
I	KEVIN S. WEEKLEY	03-841-0056.0000
J	MICHAEL PAUL ALLEN	03-841-0061.0003
K	ERNEST F. & JOANN CAPP	03-841-0061.0001
L	ERNEST F. & JOANN P. CAPP	03-841-0062.0000
M	WILLIAM & DAWNA MILLER	03-841-0061.0002
N	ERNEST & JOANN PAULINE CAPP	03-841-0053.0000
O	DUSTIN DAVID & MARY ELIZABETH WHITE	03-841-0051.0000
P	SCOTT A. & SANDRA J. SANDRETH (SURV.)	03-841-0050.0000
Q	WINDSOR POWER HOUSE COAL CO.	03-841-0048.0000
R	WINDSOR POWER HOUSE COAL CO.	03-836-0102.0000
S	WINDSOR POWER HOUSE COAL CO.	03-836-0100.0000
T	WINDSOR POWER HOUSE COAL CO.	03-836-0091.0000
U	WINDSOR POWER HOUSE COAL CO.	01-8836-0022.0000
V	WINDSOR POWER HOUSE COAL CO.	01-8836-0025.0000
W	MARY LOUISE MCALLISTER	01-8836-0020.0000
X	LEITHA ADAMSON	01-8836-0019.0000
Y	RALPH & MARY ANN PLANTS	01-8836-0004.0000
Z	PAUL & GENEVIEVE CUNNINGHAM	01-8836-0017.0000
AA	PAUL & GENEVIEVE CUNNINGHAM	01-8836-0016.0000
AB	FRANKLIN MILLER	01-8836-0015.0000
AC	FRANKLIN MILLER	01-8836-0014.0000
AD	FRANKLIN MILLER	01-8836-0013.0000
AE	FRANKLIN MILLER	01-8836-0012.0000
AF	FRANKLIN & CONNIE J. MILLER	01-8836-0011.0000
AG	FRANKLIN & CONNIE J. MILLER	01-8836-0010.0000
AH	CHERYL E. SMITH	01-8836-0009.0000
AI	STEVEN ANDREW & DEBBIE MURDOCK	01-8836-0008.0000
AJ	DANIEL L. & CATHY J. JOHNSTON	01-8836-0007.0000
AK	LELAND J. & TRACY A. DICKINSON	01-8836-0006.0000
AL	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0001.0000
AM	CHRISTOPHER DEAN	01-836K-0030.0000
AN	CHARLES G. & CHRISTINE L. HOOD	01-836K-0031.0000
AO	CHARLES G. & CHRISTINE L. HOOD	01-836K-0050.0003
AP	JAMES D. MEADOWS	01-836K-0050.0001
AQ	JAMES D. MEADOWS	01-836K-0050.0002

REVISIONS:	COMPANY:	 	
	OPERATOR'S:	BARRY GREATHOUSE A BRK	
	WELL #:	205H	
	DISTRICT:	COUNTY:	STATE:
	BUFFALO	BROOKE	WV
			DATE: 10-08-2018
			DRAWN BY: D. REED
			SCALE: N/A
			DRAWING NO: 2017-422
			WELL LOCATION PLAT
			PROPERTY NUMBER 2501166081
			PAD ID 3001156331



ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AR	MARK L & SHARON KAY JORDAN	01-836K-0050.0000
AS	MARK L & SHARON KAY JORDAN	01-836K-0049.0000
AT	JOHN E. & VIOLET E. CORSO	01-836K-0048.0000
AU	JOHN E. & VIOLET E. CORSO	01-836K-0047.0000
AV	JOHN E. & VIOLET E. CORSO	01-836K-0046.0000
AW	AYLSSA R. NEGRI	01-836K-0045.0000
AX	AYLSSA R. NEGRI	01-836K-0044.0000
AY	JOHN MILLER	01-836K-0043.0000
AZ	DONALD & ROSEMARIE MEADOWS	01-836K-0042.0000
BA	PAUL A. & MARY R. NEGRI	01-836K-0041.0000
BB	MORRIS W. BLEAU	01-836K-0040.0000
BC	ALICE M. TAYLOR	01-836K-0039.0000
BD	JESSE MCKEE	01-836K-0038.0000
BE	LUNDA DARLIN SPENCER	01-836K-0037.0000
BF	MARISSA J. & ROBERT B. FORSHEY	01-836K-0036.0000
BG	DONALD E. & PATRICIA A. GILBERT	01-836K-0034.0000
BH	MARISSA J. FORSHEY	01-836K-0033.0000
BI	MARISSA J. FORSHEY	01-836K-0032.0000
BJ	WANDA S. JONES	01-836K-0014.0000
BK	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836K-0013.0000
BL	C & P TELEPHONE COMPANY OF WEST VIRGINIA	01-836F-0078.0000
BM	JAMES B. LANDWEHR SR.	01-836F-0080.0000
BN	LUNDA M. LEMASTERS	01-836F-0087.0000
BO	AMY N. FREY	01-836F-0088.0000
BP	GILBERT FEZER	01-836F-0103.0000
BQ	WANDA MARLENE SAYRE	01-836F-0104.0000
BR	WANDA MARLENE SAYRE	01-836F-0105.0000
BS	WANDA MARLENE SAYRE	01-836F-0106.0000
BT	WANDA MARLENE SAYRE	01-836F-0107.0000
BU	WANDA MARLENE SAYRE	01-836F-0108.0000
BV	RENEE M. ALLMAN	01-836F-0109.0000
BW	MILDRED M. HUNT, ESTATE	01-836F-0110.0000
BX	DENNIS RUSCHEL	01-836K-0001.0000
BY	DENNIS RUSCHEL	01-836K-0002.0000
BZ	VILLAGE OF BEECH BOTTOM	01-836K-0003.0000
CA	DOLORES VIRGINIA COEN	01-836K-0012.0000
CB	VILLAGE OF BEECH BOTTOM	01-836K-0011.0000
CC	CURTIS D. & TINA L. OSSMAN	01-836K-0010.0000
CD	LUNDA COX	01-836K-0009.0000
CE	WILLIAM JONES	01-836K-0008.0000
CF	NICHOLAS RYNAWEC	01-836F-0098.0000
CG	GARY EDWARD & CONSTANCE L. LEONARD	01-836F-0095.0000
CH	ESTATE OF CHRIS KERCHER	01-836F-0094.0000
CI	WILLIAM E. & DEBRA L. LEONARD	01-836F-0093.0000
CJ	TARA D. SUTER	01-836F-0092.0000
CK	TARA D. SUTER	01-836F-0091.0000
CL	JOHN ESKEY	01-836F-0090.0000
CM	AMY N. FREY	01-836F-0089.0000
CN	BRUCE & DEBBI SELMON	01-836F-0088.0000
CO	BRUCE & DEBBI SELMON	01-836F-0085.0000
CP	TERRY LYNN LILLY	01-836F-0084.0000
CQ	GEORGE W. & CHARLOTTE BARNHART	01-836F-0081.0000
CR	GEORGE W. & CHARLOTTE BARNHART	01-836F-0079.0000
CS	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836F-0077.0000
CT	MARK T. SVETIC	01-836F-0025.0000
CU	JAC FRED W.V. LLC, A NORTH CAROLINA LLC	01-836F-0026.0000
CV	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0076.0000
CW	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0075.0000
CX	SHELBY L. CASTO	01-836F-0074.0000
CY	SHELBY L. CASTO	01-836F-0073.0000
CZ	PHYLLIS MARKER	01-836F-0072.0000
DA	GLENN T. & CAROLYN MOORE	01-836F-0071.0000
DB	ARCH J. & VERA E. BARTZ (TRANSFER UPON DEATH)	01-836F-0021.0000
DC	JOHN F. KRIEGER	01-836F-0027.0000
DD	JUNE E. MORRELL	01-836F-0066.0000
DE	SHIRLEY M. RYNAWEC	01-836F-0065.0000
DF	ALLEN KATH & CAROLE YAHRLING	01-836F-0064.0000
DG	JUNE E. MORRELL	01-836F-0063.0000
DH	EDWARD A. POLAND	01-836F-0062.0000
DI	LELAND J. & TRACEY A. DICKINSON	01-836F-0061.0000
DJ	THE VILLAGE OF BEECH BOTTOM	01-836F-0060.0000
DK	JOYCE L. PAINTER	01-836F-0059.0000
DL	JANET L. RICHARDSON	01-836F-0058.0000
DM	JANET L. RICHARDSON	01-836F-0057.0000
DN	JANET L. RICHARDSON	01-836F-0056.0000
DO	JANET L. RICHARDSON	01-836F-0055.0000
DP	JANET L. RICHARDSON	01-836F-0054.0000
DD	MONONAHELA POWER COMPANY	01-836F-0053.0000
DR	LARRY W. GRIMES	01-836F-0052.0000
DS	LARRY W. GRIMES	01-836F-0051.0000
DT	BOARD OF EDUCATION	01-836B-0108.0000
DJ	ROBERT SADLER	01-836F-0033.0000
DV	JAMIE ISINGHODD	01-836F-0034.0000
DW	JUNE E. MORRELL	01-836F-0035.0000
DX	MELISSA Q. KEMP	01-836F-0036.0000
DY	JUNE E. MORRELL	01-836F-0037.0000
DZ	JUNE E. MORRELL	01-836F-0038.0000
EA	JUNE E. MORRELL	01-836F-0017.0000
EB	BARBARA JO MCCUTCHEAN	01-836F-0004.0000
EC	BARBARA JO MCCUTCHEAN	01-836F-0003.0000
ED	BARBARA JO MCCUTCHEAN	01-836F-0002.0000
EE	LORETTA A. PALMER	01-836B-0112.0000
EF	FACHEL J. MCCUNE	01-836B-0113.0000
EG	GREGORY GEORGE & TARA SHEPERD	01-836B-0114.0000
EH	GREGORY GEORGE & TARA SHEPERD	01-836B-0097.0000
EI	VILLAGE OF BEECH BOTTOM	01-836B-0095.0000
EJ	BEECH BOTTOM FIRE DEPARTMENT	01-836B-0094.0000
EK	VILLAGE OF BEECH BOTTOM	01-836B-0096.0000
EL	VILLAGE OF BEECH BOTTOM	01-836B-0080.0000
EM	VILLAGE OF BEECH BOTTOM	01-836B-0079.0000
EN	SHARON CALENDINE	01-836B-0078.0000
EO	VILLAGE OF BEECH BOTTOM	01-836B-0001.0000
EP	WHEELING OHIO COUNTY BOARD OF HEALTH	01-836B-0115.0002
EO	VILLAGE OF BEECH BOTTOM	01-836B-0001.0000
ER	VARIETY DESIGNS, INC.	01-836B-0115.0001
ES	CLINTON W. & LORRAINE DEWITT	01-836B-0081.0000
ET	VILLAGE OF BEECH BOTTOM	01-836B-0017.0000
EU	JUSTIN & AMANDA SMART	01-836B-0013.0000
EV	GEORGE W. & JUDY LEWIS	01-836B-0012.0000
EW	BELINDA DAUGHERTY & ET AL (L/E: JUNE ANN DAUGHERTY)	01-836B-0011.0000
EX	BARBARA JO MCCUTCHEAN	01-836B-0010.0000
EY	WILLIAM B., JR. & ELIZABETH N. CAIN	01-836B-0009.0000
EZ	SHEILA ANN LAZEAR	01-836B-0008.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
FA	SHEILA LAZEAR	01-836B-0007.0000
FB	JOHN C. & KELLY A. RICHE	01-836B-0008.0000
FC	JOHN C. & KELLY A. RICHE	01-836B-0005.0000
FD	PATRICK J. DALBO	01-836B-0002.0000
FE	ALLEGHENY ENERGY SUPPLY COMPANY, LLC	01-8B36-0030.0000
FF	THE BROOKE COUNTY COMMISSION	01-8B41-0008.0000
FG	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8B36-0002.0000
FH	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8B36-0023.0000
FI	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0117.0000
FJ	OHIO RIVER (STATE OF WEST VIRGINIA)	OHIO RIVER
FK	BROWNLEE LAND VENTURES, LP	01-8B31-0007.0000
FL	BROWNLEE LAND VENTURES, LP	01-8B31-0008.0000
FM	ROSSO ENTERPRISES, LLC (A WEST VIRGINIA CORPORATION)	01-8B31-0008.0001
FN	WHEELING LAND DEVELOPMENT CORPORATION	01-8B31-0009.0000
FO	WHEELING LAND DEVELOPMENT CORPORATION	01-8B31-0009.0001
FP	WEST VIRGINIA DEPARTMENT OF HIGHWAYS	03-827-0011.0000
FO	CHRISTIAN LIFE APOSTOLIC CHURCH	01-8B31-0046.0000
FR	RYAN M. & MISTY D. WILLIAMS	01-8B31-0045.0000
FS	LEON W. FALCON, CRAIG A. FALCON & CARL J. FALCON	01-8B31-0044.0000
FT	LEON W. FALCON, CRAIG A. FALCON & CARL J. FALCON	01-8B31-0043.0000
FU	KARU A. SNYDER	01-8B31-0026.0000
FV	WILLIAM E. & SUSAN E. MALSON	01-8B31-0023.0000
FW	WILLIAM E. & SUSAN A. MALSON	01-8B31-0022.0000
FX	OTIS M., JR. & EDNA JO BAKER	01-8B31-0019.0000
FY	GARY LEE & WENDY FAITH BENNETT	01-8B31-0011.0000
FZ	GARY LEE & WENDY FAITH BENNETT	01-8B31-0010.0000
GA	EMASES PROPERTIES, LLC	01-8B31-0009.0000
GB	JEFFREY A. & AMY J. GIBSON	01-836B-0122.0000
GC	JOSEPH H. HODGES	01-836B-0121.0000
GD	JOYCE A. SMITH	01-836B-0120.0000
GE	EMASES PROPERTIES, LLC	01-836B-0121.0001
GF	LARRY WILLIAM COUCH (L/E: JEAN COUCH)	01-836B-0120.0000
GG	EDWARD A. CONERY	01-836B-0125.0000
GH	LOUIS & ARLINE MILLER	01-836-0005.0000
GI	LOUIS & ARLINE MILLER	03-836-0006.0000
GJ	ELVINA WELLS BUCY	03-831-0074.0000
GK	BERNARD J. LOMBARD III	03-831-0081.0000
GL	STEPHEN A. FODOR & JUDY L. BROWNLEE	03-836-0176.0000
GM	JOHN R. HOFFMAN & ALICE J. BUCHANAN	03-836-0175.0000
GN	PAUL D. & KIMBERLY D. LEONARD	03-836-0173.0000
GO	BRANNON P. & EMILY M. LEONARD	03-836-0172.0000
GP	BRANNON P. & EMILY M. LEONARD	03-836-0171.0000
GD	HARLEY J. LEMASTERS	03-836-0170.0000
GR	HARLEY J. LEMASTERS	03-836B-0047.0000
GS	HARLEY J. LEMASTERS	03-836B-0046.0000
GT	HARLEY J. LEMASTERS	03-836B-0045.0000
GU	HARLEY J. LEMASTERS	03-836B-0044.0000
GV	HARLEY J. LEMASTERS	03-836B-0043.0000
CW	HARLEY J. LEMASTERS	03-836B-0042.0000
CX	HARLEY J. LEMASTERS	03-836B-0041.0000
GY	LESTER & KATHERINE WALLACE	03-836B-0001.0000
GZ	TONYA S. LOWE	03-836B-0011.0000
HA	WINDSOR COAL COMPANY	03-836B-0024.0000
HB	WINDSOR COAL COMPANY	03-836B-0022.0000
HC	WINDSOR COAL COMPANY	03-836B-0021.0000
HD	FLOYD R. & DORIS M. LOUGHRIE	03-836B-0032.0000
HE	WINDSOR COAL COMPANY	03-836B-0036.0000
HF	KEITH L. HAMILTON	03-836B-0035.0000
HG	KEITH L. HAMILTON	03-836B-0037.0000
HH	FLOYD R. & DORIS M. LOUGHRIE	03-836B-0038.0000
HI	BRIAN L. TESLOVICH	03-836-0145.0000
HJ	COLUMBIA GAS COMPANY	03-836-0144.0000
HK	BEECH BOTTOM VOLUNTEER FIRE DEPARTMENT	03-836-0105.0000
HL	TREVOR SEAN RICHMAN	03-836-0106.0000
HM	MARK PHILLIPS (J), GAIL ATKINSON (J) & ET AL	03-836-0107.0000
HN	CAROL L. DUFFY	03-836-0113.0000
HO	LORETTA JOAN BASIL	03-841-0099.0000
HP	ERNEST F. & JOANNE P. CAPP	03-841-0098.0000
HO	ELIZABETH ELLEN FLURHARTY	03-841-0085.0000
HR	DANIEL R. GORBY	03-841-0061.0006
HS	COREY CONLEY	03-841-0061.0005
HT	CARL & JUDITH SPENCER	03-841-0065.0000
HU	EMILY J. HUFFNER	03-841-0065.0001
HV	CARL E. & JUDITH SPENCER	03-841-0066.0000
HW	SANDRA W. BUTLER	03-841-0061.0004
HX	ROBERT LEE & DELWA LOU HUFFMAN	03-841-0067.0000
HY	SANDRA W. BUTLER	03-841-0068.0000
HZ	SANDRA W. BUTLER	03-841-0069.0000
IA	SANDRA W. BUTLER	03-841-0071.0000
IB	SANDRA W. BUTLER	03-842-0078.0000
IC	JAY G. COLLINS	03-841-0079.0000
ID	JOSEPH P. SCRIP, SR. & ROBIN M. SCRIP	03-841-0080.0002
IE	SHAWN M. SINES	03-841-0085.0000
IF	HENRY MIKELS & BONNIE J. BURKETT	03-841-0086.0001
IG	JASON D. & MARY E. WHITE	03-841-0086.0000
IH	ROBERT D. HILDEBRAND, II & LESLIE C. HILDEBRAND	03-842-0063.0000
II	FRANK G. & KELLY L. ANSCOUGH	03-842-0071.0000
IJ	HENRY HEINZEROTH	03-842-0032.0000
IK	LUTHER GRIZZEL	03-842-0030.0000
IL	KATHY LYNN MAYHEW, MICHAEL MAYHEW & ET AL	03-842-0027.0000
IM	BRIAN B. & CASEY K. RICHARDSON	03-836B-0020.0000

03/01/2019

REVISIONS:

COMPANY:

**SWN**  
Production Company, LLC

**SWN** <sup>R+</sup> <sup>A</sup> <sup>V+</sup> <sup>0</sup>  
Production Company™

OPERATOR'S

BARRY GREATHOUSE A BRK

DATE: 10-08-2018

WELL #:

205H

DRAWN BY: D. REED

DISTRICT:  
BUFFALO

COUNTY:  
BROOKE

STATE:  
WV

SCALE: N/A  
DRAWING NO: 2017-422  
WELL LOCATION PLAT

PROPERTY NUMBER 2501166081  
PAD ID 3001156331



SWN Production Company, LLC  
P O Box 12359  
Spring, Texas 77391-2359  
www.swn.com

December 10, 2018

03/01/2019

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 A BRK 205H in Brooke County, West Virginia, Drilling under Hukill 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 Hukill 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

10000 Energy Drive  
Spring, TX 77389-4954

The Right People doing the Right Things,  
wisely Investing the cash flow from our  
underlying Assets, will create Value+<sup>®</sup>

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WV Department of  
Environmental Protection

WW-6A1  
(5/13)

Barry Greathouse A  
BRK 205H  
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)**

03/01/2019

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

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


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

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

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

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

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

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

Page 1 of \_\_\_\_\_

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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 205H  
 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	17.00%	10/751	
				SWN Production Company, LLC		32/384	
				Barry L. Greathouse and Patricia A. Greathouse (Rayle Coal Company)	Great Lakes Energy Partners, LLC	15.50%	26/649
				Range Resources-Appalachia, LLC		20/733	
				Chesapeake Appalachia, LLC SWN Production Company, LLC		10/552 33/492	
2)	03-0B41-0080-0001-0000	Mark & Trina Provenzano	Jay G. Collins & Barbara J Collins, husband and wife	Fortuna Energy, Inc.	12.50%	9/864	
				Range Resources-Appalachia, LLC		10/159	
				Chesapeake Appalachia, LLC		10/552	
				SWN Production Company, LLC		30/480	
3)	03-0B41-0080-0000-0000	Jay Glen Collins and Barbara J. Collins	Jay G. Collins & Barbara J Collins, husband and wife	Fortuna Energy, Inc.	12.50%	9/864	
				Range Resources-Appalachia, LLC		10/159	
				Chesapeake Appalachia, LLC		10/552	
				SWN Production Company, LLC		30/480	
4)	03-0B41-0061-0000-0000	William & Dawna Miller	William Miller and Dawna Miller, husband and wife, JTWROS	Chesapeake Appalachia, LLC	17.00%	27/280	
				SWN Production Company, LLC		30/480	
5)	03-0B41-0063-0000-0000	Ernest & Joann P Capp	Ernest Capp and Joann P. Capp	Great Lakes Energy Partners, LLC	12.50%	10/103	
				Range Resources-Appalachia, LLC		10/159	
				Chesapeake Appalachia, LLC		10/552	
				SWN Production Company, LLC		30/480	
6)	03-0B41-0064-0000-0000	Ernest & Joann P Capp	Ernest Capp and Joann P. Capp	Great Lakes Energy Partners, LLC	12.50%	10/103	
				Range Resources-Appalachia, LLC		10/159	
				Chesapeake Appalachia, LLC		10/552	
				SWN Production Company, LLC		30/480	
7)	03-0B41-0052-0000-0000	Ernest & Joann P Capp	Ernest Capp and Joann P. Capp	Great Lakes Energy Partners, LLC	12.50%	10/115	
				Range Resources-Appalachia, LLC		10/159	
				Chesapeake Appalachia, LLC		10/552	
				SWN Production Company, LLC		30/480	
				Larry Corbin and Beverly Ann Corbin	Chesapeake Appalachia, LLC	18.00%	23/707
	SWN Production Company, LLC		30/480				

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 Barry Greathouse A BRK 205H  
 Brooke County, West Virginia

		Sydney K Galbraith and Nicholas M. Galbraith	Chesapeake Appalachia, LLC	18.00%	22/103	
			SWN Production Company, LLC		30/480	
		Thomas Ellsworth and Tracey C. Ellsworth	Chesapeake Appalachia, LLC	18.00%	22/552	
			SWN Production Company, LLC		30/480	
		Gregory Lawrence Milliken	Chesapeake Appalachia, LLC	18.00%	27/400	
			SWN Production Company, LLC		30/480	
		Gary Laney and Linda Gail Laney	Chesapeake Appalachia, LLC	18.00%	23/610	
			SWN Production Company, LLC		30/480	
		Richard Leigh and Christine Lee Leigh	Chesapeake Appalachia, LLC	18.00%	25/443	
			SWN Production Company, LLC		30/480	
		Benjamin Milliken and Brandi Milliken, husband and wife and James Andrew Milliken, single	Chesapeake Appalachia, LLC	18.00%	28/353	
			SWN Production Company, LLC		30/480	
		William Charles Stewart and Connie Stewart	Chesapeake Appalachia, LLC	18.00%	23/615	
			SWN Production Company, LLC		30/480	
8)	03-0B41-0049-0000-0000	Windsor Power House Coal Company	CNX Gas Company LLC	SWN Production Company, LLC	18.00%	33/687
		Larry Corbin and Beverly Ann Corbin	Chesapeake Appalachia, LLC	18.00%	23/707	
			SWN Production Company, LLC		30/480	
		Sydney K Galbraith and Nicholas M. Galbraith	Chesapeake Appalachia, LLC	18.00%	22/103	
			SWN Production Company, LLC		30/480	
		Thomas Ellsworth and Tracey C. Ellsworth	Chesapeake Appalachia, LLC	18.00%	22/552	
			SWN Production Company, LLC		30/480	
		Gregory Lawrence Milliken	Chesapeake Appalachia, LLC	18.00%	27/400	
			SWN Production Company, LLC		30/480	
		Gary Laney and Linda Gail Laney	Chesapeake Appalachia, LLC	18.00%	23/610	
			SWN Production Company, LLC		30/480	
		Richard Leigh and Christine Lee Leigh	Chesapeake Appalachia, LLC	18.00%	25/443	
			SWN Production Company, LLC		30/480	
		Benjamin Milliken and Brandi Milliken, husband and wife and James Andrew Milliken, single	Chesapeake Appalachia, LLC	18.00%	28/353	
			SWN Production Company, LLC		30/480	

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EXHIBIT "A"

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 Barry Greathouse A BRK 205H  
 Brooke County, West Virginia

		William Charles Stewart and Connie Stewart	Chesapeake Appalachia, LLC	18.00%	23/615
			SWN Production Company, LLC		30/480
9)	03-0836-0104-0000-0000	Windsor Power House Coal Company	CNX Gas Company LLC	21%	947/657
10)	03-0836-0103-0000-0000	Windsor Power House Coal Company	West Penn Power Company	18.00%	48/524
11)	03-0836-0103-0001-0000	The County Commission of Brooke County, West Virginia	West Penn Power Company	18.00%	48/524
12)	03-0836-0101-0000	Windsor Power House Coal Company	HG Energy II Appalachia LLC	18.00%	47/677
13)	03-0836L-0021-0001-0000	Brian D. Richardson and Casey K. Richardson	Master Mineral Holdings I, LP	18.00%	47/20
14)	03-0836L-0015-0000-0000	Connie J. Wagner	Connie J. Wagner	18.00%	43/296
15)	03-0836L-0017-0000-0000	Amanda Huff	Amanda Moore	15%	10/270
			Mountaineer Natural Gas Company		24/659
			Chesapeake Appalachia, LLC		30/840
16)	03-0836L-0011-0001-0000	Jeffrey M. Barr and Kristina L. Barr	Tonya S. Francis and David M. Francis	15.00%	10/262
			Mountaineer Natural Gas Company		24/659
			Chesapeake Appalachia, LLC		30/480
17)	01-0836-0023-0001-0000	Business Dev Corp of the Northern Panhandle			
		Beverly Yvonne Bane Baker	SWN Production Company, LLC	18.00%	47/312
		Clayton Marchant Bane	SWN Production Company, LLC	18.00%	47/276
		Darla Bycott	SWN Production Company, LLC	18.00%	47/270
		Susan Pease	SWN Production Company, LLC	16.00%	49/421
		Doris Ann Mathews Rogus	SWN Production Company, LLC	18.00%	49/488
		James Miller Mathews	SWN Production Company, LLC	18.00%	49/494
		Jean E. Mathews Gressly	SWN Production Company, LLC	18.00%	49/491
18)		Right of Way			
19)	01-B36F-0070-0000	Carolyn K. Moore	Bounty Minerals, LLC	18.00%	49/484
20)	01-B36F-0069-0000	Valerie Gail Gray and Robert Lee Gray	Bounty Minerals, LLC	18.00%	49/484

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 Barry Greathouse A BRK 205H  
 Brooke County, West Virginia

21)	01-B36F-0068-0000	Jeffery L. Stollar	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
22)		Right of Way				
23)	01-B36F-0067-0000	June E. Morrell	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
24)		Right of Way				
25)	01-B36F-0028-0000	Jon Scott Mulhollen	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
26)	01-B36F-0029-0000	Frank Kvocka and Terissa J. Kvocka	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
27)	01-B36F-0030-0000	June E. Morrell	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
28)	01-B36F-0031-0000	Cheryl E. Smith	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
29)	01-B36F-0032-0000	Robert Harry and Connie Fay Sadler	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
30)		Right of Way				
31)	01-B36F-0020-0000	Arch J. Bartz and Vera E. Bartz	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
32)	01-B36F-0019-0000	June E. Morrell	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
33)	01-B36F-0018-0000	June E. Morrell	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
34)		Right of Way				
35)	01-B36F-0001-0000	June E. Morrell	Bounty Minerals, LLC	SWN Production Company, LLC	18.00%	49/484
36)		Right of Way				
37)	01-0836B-0119-0000	Business Development Corp of the Northern Panhandle	Bounty Minerals, LLC	SWN Production Company, LLC	18%	47/473
38)	01-0836B-0115-0000	Brownlee Land Ventures	Beverly Baker	SWN Production Company, LLC	18.00%	47/312
			Clayton Marchant Bane	SWN Production Company, LLC	18.00%	47/276
			Darla Bycott	SWN Production Company, LLC	18.00%	47/270
			Susan Pease	SWN Production Company, LLC	16.00%	49/421
			Doris Rogus	SWN Production Company, LLC	18.00%	49/488
			James Miller Mathews	SWN Production Company, LLC	18.00%	49/494

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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 205H  
Brooke County, West Virginia

		Jean Elizabeth Gressley	SWN Production Company, LLC	18.00%	49/491
		Ridgetop Appalachia, LLC	SWN Production Company, LLC	18.00%	48/134
39)	01-0B36B-0115-0003	Brownlee Land Ventures			
		Beverly Baker	SWN Production Company, LLC	18.00%	47/312
		Clayton Marchant Bane	SWN Production Company, LLC	18.00%	47/276
		Darla Bycott	SWN Production Company, LLC	18.00%	47/270
		Susan Pease	SWN Production Company, LLC	16.00%	49/421
		Doris Rogus	SWN Production Company, LLC	18.00%	49/488
		James Miller Mathews	SWN Production Company, LLC	18.00%	49/494
		Jean Elizabeth Gressley	SWN Production Company, LLC	18.00%	49/491
40)	01-0B36B-0115-0004	The Village of Beech Bottom			
		Beverly Baker	SWN Production Company, LLC	18.00%	47/312
		Clayton Bane	SWN Production Company, LLC	18.00%	47/276
		Darla Bycott	SWN Production Company, LLC	18.00%	47/270
		Susan Pease	SWN Production Company, LLC	16.00%	49/421
		Doris Rogus	SWN Production Company, LLC	18.00%	49/488
		James Miller Mathews	SWN Production Company, LLC	18.00%	49/494
		Jean Elizabeth Gressley	SWN Production Company, LLC	18.00%	49/491
41)	01-BB36-0024-0000	Business Development Corp of the Northern Panhandle			
		Beverly Yvonne Bane Baker	SWN Production Company, LLC	18.00%	47/312
		Clayton Marchant Bane	SWN Production Company, LLC	18.00%	47/276
		Darla Bycott	SWN Production Company, LLC	18.00%	47/270
		Susan Pease	SWN Production Company, LLC	16.00%	49/421

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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 205H  
 Brooke County, West Virginia

		Doris Ann Mathews Rogus	SWN Production Company, LLC	18%	49/488
		James Miller Mathews	SWN Production Company, LLC	18%	49/494
		Jean Elizabeth Gressley	SWN Production Company, LLC	18%	49/491
42)	01-0836B-0116-0000	Business Development Corp of the Northern Panhandle			
		Beverly Yvonne Bane Baker	SWN Production Company, LLC	18.00%	47/312
		Clayton Marchant Bane	SWN Production Company, LLC	18.00%	47/276
		Darla Bycott	SWN Production Company, LLC	18.00%	47/270
		Susan Pease	SWN Production Company, LLC	16.00%	49/421
		Doris Ann Mathews Rogus	SWN Production Company, LLC	18.00%	49/488
		James Miller Mathews	SWN Production Company, LLC	18.00%	49/494
		Jean Elizabeth Gressley	SWN Production Company, LLC	18.00%	49/491
43)	01-0836B-0126-0000	Business Development Corp of the Northern Panhandle	Ridgetop Appalachia, LLC	SWN Production Company, LLC	18% 48/134

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