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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, July 1, 2020  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC  
POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for ROBERT BONE BRK 5H  
47-009-00286-00-00

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 a light blue circular stamp.

Operator's Well Number: ROBERT BONE BRK 5H  
Farm Name: ROBERT BONE  
U.S. WELL NUMBER: 47-009-00286-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 7/1/2020

Promoting a healthy environment.

WW-6B  
(04/15)

4700900286

API NO. 47-009

OPERATOR WELL NO. Robert Bone BRK 5H

Well Pad Name: Robert Bone 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-Brook 01-Buffal 247-Bethany & 62  
Operator ID County District Quadrangle

2) Operator's Well Number: Robert Bone BRK 5H Well Pad Name: Robert Bone BRK Pad

3) Farm Name/Surface Owner: Robert Bone Public Road Access: Hukill Run Road

4) Elevation, current ground: 1148' Elevation, proposed post-construction: 1148'

5) Well Type (a) Gas  Oil  Underground Storage

Other

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No Yes

*C. BLO 6-8-2020*

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- 5826', Target Base TVD- 5878', Anticipated Thickness- 52', Associated Pressure- 3820

8) Proposed Total Vertical Depth: 5863'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23662'

11) Proposed Horizontal Leg Length: 17168.86'

12) Approximate Fresh Water Strata Depths: 344'

13) Method to Determine Fresh Water Depths: Salinity Profile

14) Approximate Saltwater Depths: 627' Salinity Profile

15) Approximate Coal Seam Depths: 309'

16) Approximate Depth to Possible Void (coal mine, karst, other): Possible Void 309'

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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Environmental Protection

*Check # 0001051576*

*6/2/2020*

*\$5,000.00*

4700900286

WW-6B  
(04/15)

API NO. 47-009

OPERATOR WELL NO: Robert Bone BRK 5H

Well Pad Name: Robert Bone 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	J-55	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	J-55	54.4#	420'	420'	414 sx/CTS
Coal	See	Surface	Casing				
Intermediate	9 5/8"	New	J-55	36#	1643'	1643'	521 sx/CTS
Production	5 1/2"	New	P-110 HP	20#	23,662'	23,662'	741 4300/ 150' inside Intermediate
Tubing							
Liners							

*C. All 6/2020*

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							

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 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 unites, horizontal 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): 15.30

22) Area to be disturbed for well pad only, less access road (acres): 5.97

23) Describe centralizer placement for each casing string:

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

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

See Attachment \*\*\*

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25) Proposed borehole conditioning procedures:

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

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\*Note: Attach additional sheets as needed.

Southwestern Energy Company

Proposed Drilling Program

Well: ROBERT BONE BRK 5 Re-entry Rig: TBD  
 Field: PANHANDLE FIELD WET Prospect: Marcellus Shale  
 County: BROOKE State: WV  
 SHL: 40.2190 Latitude -80.6023 Longitude  
 KB Elev: 1,174 ft MSL KB: 26 ft GL Elev: 1,148 ft MSL



*C-880*  
*6.8.2020*

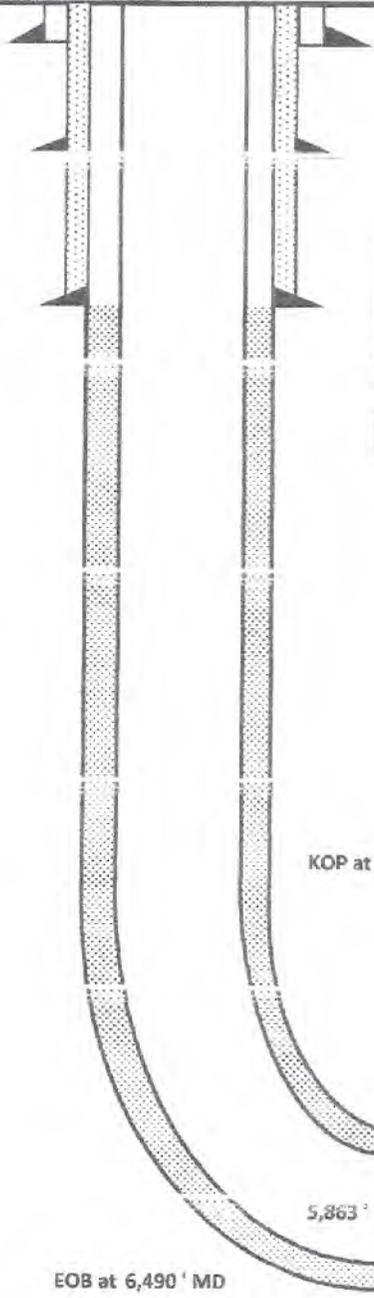
PROD TOC Lead @ 1,767' MD  
 PROD TOC Tail @ 5,021' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	100'
Surface Casing	23.75	51.4 #	J-55	0'	420'
Intermediate	9.625	36.0 #	J-55	0'	1,643'
Production	5.5	20.0 #	P-110 HP	0'	23,662'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	414	A	15.6
Intermediate:	521	A	15.6
Production:	4303	A	15.6



Freshwater Depth - 344' TVD  
 Coal Depth - 309' TVD  
 Saltwater Depth - 627' TVD  
 TVD - 5,863'  
 IMD - 23,662'

EOB at 6,490' MD  
 EOB at 5,863' TVD  
 SHL Onondaga 5,878' TVD

Onondaga 5,683' TVD

Created by: C R Hall on 05/27/2020

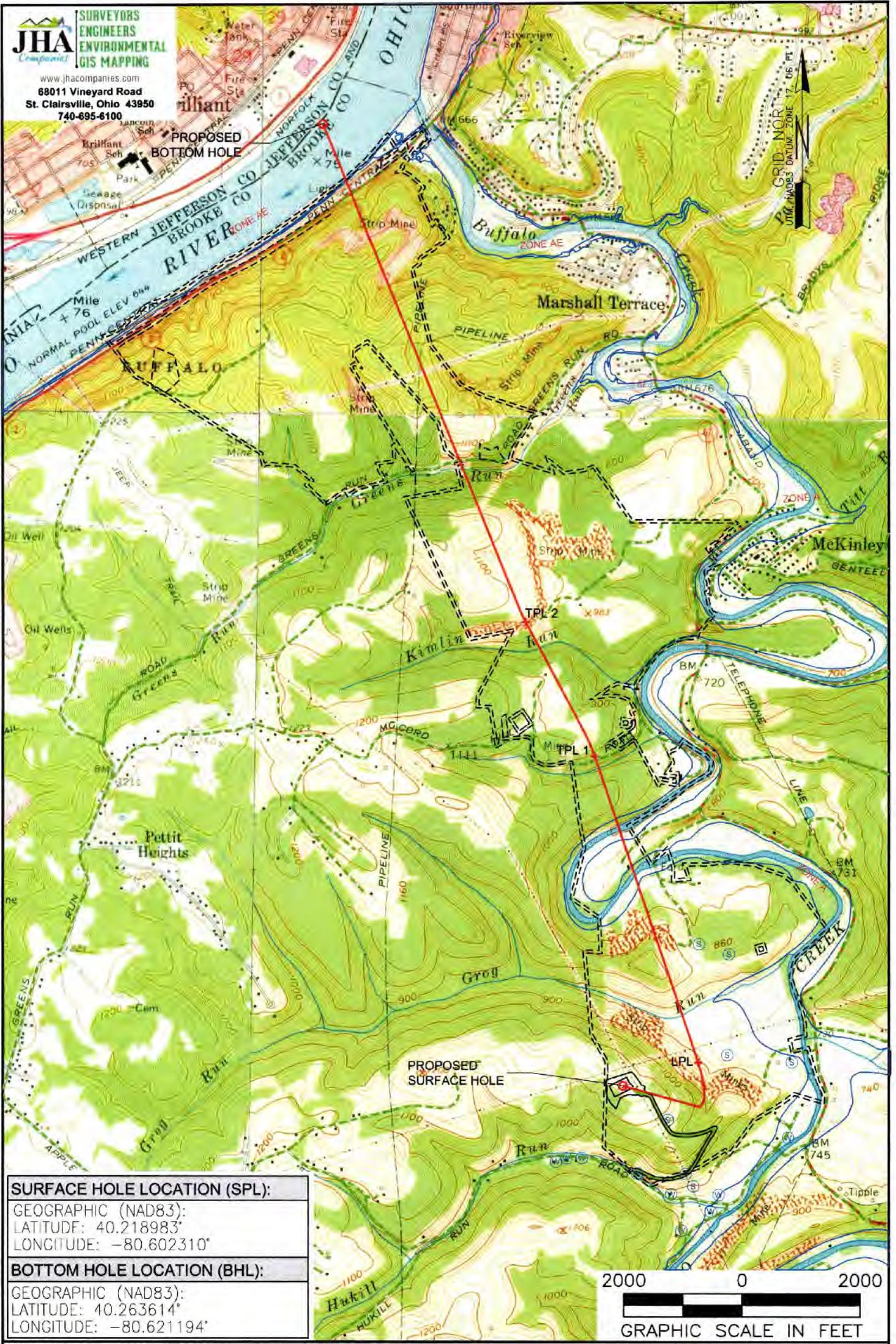
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**JHA**  
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St. Clairsville, Ohio 43950  
740-695-6100



<b>SURFACE HOLE LOCATION (SPL):</b>
GEOGRAPHIC (NAD83): LATITUDE: 40.218983' LONGITUDE: -80.602310'
<b>BOTTOM HOLE LOCATION (BHL):</b>
GEOGRAPHIC (NAD83): LATITUDE: 40.263614' LONGITUDE: -80.621194'



**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
- LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

<b>WELL OPERATOR:</b> SWN PRODUCTION COMPANY, LLC	<b>WELL (FARM) NAME:</b> ROBERT BONE BRK	<b>WELL #</b> 5H	<b>SERIAL #</b> XXXX
<b>ADDRESS:</b> 1300 FORT PIERPONT DRIVE, SUITE 201 MORGANTOWN WV 26508	<b>COUNTY - CODE</b> BROOKE - 009	<b>DISTRICT:</b> BUFFALO	
<b>SURFACE OWNER:</b> ROBERT BONE	<b>USGS 7 1/2 QUADRANGLE MAP NAME</b> BETHANY, WV & STEUBENVILLE EAST, OH		

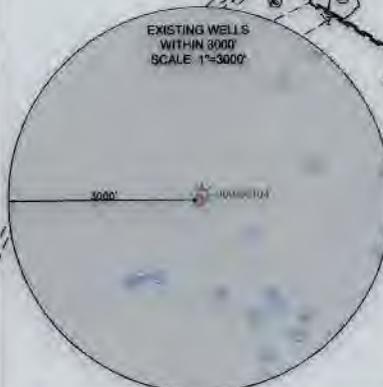
(2,000' SCALE) LATITUDE: 40°17'30" BOTTOM HOLE  
(2,000' SCALE) LATITUDE: 40°15'00" SURFACE HOLE

10603'  
5310'

**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 PLAN 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.

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



<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4452138.47 EASTING: 533838.08
<b>LANDING POINT (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4452263.71 EASTING: 534224.03
<b>TURNING POINT LOCATION (TPL1)</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4453839.00 EASTING: 533662.28
<b>TURNING POINT LOCATION (TPL2)</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4454527.84 EASTING: 533295.41
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4457085.25 EASTING: 532210.13

LINE	BEARING	DISTANCE
L1	S 54°59'07" W	843.16'
L2	N 77°34'33" W	2072.21'



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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

COMPANY: **SWN** Production Company, LLC

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL &amp; GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p>	<p>OPERATOR'S WELL #: ROBERT BONE BRK 5H</p> <p>API WELL #: 47 STATE 009 COUNTY PERMIT 00286</p>
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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	ELEVATION: 1147.5'
DISTRICT: BUFFALO	COUNTY: BROOKE	QUADRANGLE: BETHANY, WV & STEUBENVILLE EAST, OH
SURFACE OWNER: ROBERT BONE		ACREAGE: ±81.99
OIL & GAS ROYALTY OWNER: ROBERT BONE		ACREAGE: ±81.99
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 (SPECIFY) <input type="checkbox"/>		
TARGET FORMATION: MARCELLUS		ESTIMATED DEPTH: 5,863' TVD 23,662' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
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<p><b>LEGEND:</b></p> <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>	<p>REVISIONS:</p> <p>REVISED DESIGNATED AGENT</p>	<p>DATE: 06-04-2020</p> <p>DRAWN BY: R. GRIMES</p> <p>SCALE: 1" = 3000'</p> <p>DRAWING NO: 2017-219</p> <p>WELL LOCATION PLAT</p>
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(2,000' SCALE) LONGITUDE: -80°35'00" SURFACE HOLE  
(2,000' SCALE) LONGITUDE: -80°35'00" BOTTOM HOLE

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	ROBERT O. BONE (S/R)	03-B37-081.0
TRACT	SURFACE OWNER	TAX PARCEL
2	WILLIAM E. & HAZEL E. JOHNSTON	03-B37-050.0
3	MARK A. CHRISTMAN	03-B37-045.0
4	JAMIE L. OHLER	03-B37-043.0
5	KEVIN R. & SANDRA A. COLLINS	03-B32-130.0
6	REBECCA L. UHLLY	03-B32-139.0
7	JOSEPH P. LIZON III & ERIN RECECCA NIXON	03-B32-192.0
8	JOSEPH P. LIZON III & ERIN RECECCA NIXON	03-B32-192.1
9	BENITA HOITT, JAMES R. JOHNSON JR., LURA M. JOHNSON (F. K. A. LURA M. HOITT), JEANETTA WELLMAN, KENT WELLMAN, RANDY WELLMAN, & CHARLES LANE KILDOW	03-B32-194.0
10	JAMES J. ALLEY	03-B32-191.0
11	DAVID MCGOWAN	03-B32-190.0
12	ROBERT G. TREADWAY	03-B32-188.0
13	SCHIAPPA & COMPANY, INC	03-B32-009.0
14	SCHIAPPA & COMPANY, INC	03-B32-010.0
15	ROBIE & GERTRUDE LOUISE MCSHANE	03-B32-029.0
16	NORMA JEAN LILLY	03-B27-017.0
17	LINDA COEN	03-B32-025.0
18	HFS LIMITED LIABILITY COMPANY	03-B27-012.0
19	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	03-B27-004.0
20	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	STATE ROUTE 2
21	HFS LIMITED LIABILITY COMPANY	03-B27-012.0
22	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	03-B27-011.0
23	CAMPBELL TRANSPORTATION COMPANY	03-B27-010.0
24	STATE OF WEST VIRGINIA	OHIO RIVER

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	BENJAMION M. MOSA & CHRISTINE L. HEISE (SURVIVOR)	03-B37-074.0
B	BENJAMION M. MOSA & CHRISTINE L. HEISE (SURVIVOR)	03-B37-079.0
C	TERRENCE & SUSAN BONE	03-B37-080.0
D	BRIAN K. & GINA M. HANEY (SURVIVOR)	03-B37-077.0
E	VEMURI HOME AND GARDENS LLC	03-B37-082.0
F	DEBRA CYPHERT, MATTHEW H. FAIR, SUSAN S. FAIR, RICHARD HENTORN	03-B37-088.0
G	DEBRA CYPHERT, MATTHEW H. FAIR, SUSAN S. FAIR, RICHARD HENTORN	03-B37-091.0
H	SCHIAPPA AND COMPANY INC.	03-B37-023.0
I	SCHIAPPA AND COMPANY INC.	03-B37-022.0
J	KEVIN D. & BRIDGET KOSLIT (SURVIVOR)	03-B37-042.0
K	CITY OF WELLSBURG COMBINED WATER AND SEWAGE	03-B37-140.2
L	CITY OF WELLSBURG COMBINED WATER AND SEWAGE	03-B32-192.2
M	EDWARD & SUSAN ZATTA	03-B32-140.0
N	ROBERT G. TREDWAY JR	03-B32-189.0
O	KAREN L. REINACHER	03-B32-187.0
P	CHARLES MICHAEL & BARBARA JEAN TREDWAY	03-B32-186.0
Q	JOYCE BRADY, BRIAN JOHNSTON, DANIEL JOHNSTON, KENNETH JOHNSTON, RALPH JOHNSTON, ROBERT JOHNSTON	03-B32-189.0
R	MASLO FARMS LLC, A PENNSYLVANIA LLC	03-B32-019.0
S	JOSEPH, DAVID, LAWRENCE, & GEORGE VIDERMAN, ETAL	03-B32-013.0
T	HAMILTON PENNY	03-B32-011.0
U	TONY J. CASTILLO & RICHARD R. OSTRANDER	03-B32-027.0
V	TONY J. CASTILLO & RICHARD R. OSTRANDER	03-B32-028.0
W	JAMES SCOTT GEAR	03-B32-026.0
X	WILLIAM & CAROLYN WALNOHA (SURVIVOR)	03-B32-014.0
Y	JOHN PORTER & BRIGETTE ROGERS (SURVIVOR)	03-B32-015.0
Z	DORITHY L. STEVENS	03-B32-016.0
AA	RUTH BERNADINE HART	03-B32-022.1
AB	WILLIAM RUSSELL WALNOHA, RUTH HART, & GEORGE WALNOHA	03-B32-022.0
AC	WILLIAM RUSSELL WALNOHA	03-B32-022.2
AD	HFS LIMITED LIABILITY COMPANY	03-B32-023.0
AE	HFS LIMITED LIABILITY COMPANY	03-B32-024.0
AF	COSS ROAD FARM LLC	03-B31-114.0
AG	HFS LIMITED LIABILITY COMPANY	03-B31-001.0
AH	CAMPBELL TRANSPORTATION COMPANY INC	03-B27-003.0
AI	SMITH REAL ESTATE, LLC	03-B27-007.0
AJ	CAMPBELL TRANSPORTATION COMPANY INC	03-B27-008.0
AK	GREG PROVENZANO	03-B27-009.0
AL	SMITH REAL ESTATE, LLC	03-B27-006.0
AM	SMITH REAL ESTATE, LLC	03-B27-005.0
AN	BROOKE COUNTY BOARD OF EDUCATION	03-B27K-212.0
AO	ABANDON RAILWAY, SOUTH OF BUFFALO CREEK	03-B27K-188.0
AP	JOSEPH K. & DIANA R. MENDEL (SURVIVOR)	03-B27K-186.0

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AQ	DIANE MENDEL	03-B27-013.0
AR	DANIEL P. & DARLA ANN LOMBARDI (SURVIVOR)	03-B27-016.0
AS	DANIEL P. LOMBARDI	03-B27K-211.0
AT	FRANCIS FORSYTHE, ALLEN LEE FORSYTHE, PAUL DAVID FORSYTHE	03-B27K-210.0
AU	ROBERT C. III & RONICA L. CRISS (SURVIVOR)	03-B27K-206.0
AV	ROBERT C. III & RONICA L. CRISS (SURVIVOR)	03-B27K-205.0
AW	RANDY M. & BRENDA WILLIAMS	03-B27K-204.0
AX	RANDY M. & BRENDA WILLIAMS	03-B27K-203.0
AY	RANY M. & BRENDA WILLIAMS (SURVIVOR)	03-B27K-202.0
AZ	JOHN J. SR, FRISCO, & JOSEPHINE IWANYSZN	03-B27K-189.0
BA	ROBIE & GERTRUDE LOUISE MCSHANE	03-B27P-030.0
BB	WILLIAM R., CAROLYN S., & JESSICA WALNOHA (SURVIVOR)	03-B32-007.0
BC	DAVID B. JONES	03-B32-008.0
BD	JEANNE L. & MELANIE JEANNE LUNSFORD	03-B32-072.0
BE	WILLIAM WHEAT & CARRIE HIGGS	03-B32-071.0
BF	WILLIAM WHEAT & CARRIE HIGGS	03-B32-070.0
BG	PATRICIA PREMESA GLORIA SAUVAGEOT	03-B32-069.0
BH	JAY D. & KARN SUE RECK	03-B32-068.0
BI	JAY D. & KARN SUE RECK	03-B32-067.0
BJ	JAY D. & KARN SUE RECK	03-B32G-067.1
BK	HERBERT MCGOWAN	03-B32G-067.0
BL	VEMURI HOME & GARDEN LLC	03-B32G-001.0
BM	DIXIE LEE OHLER	03-B32G-002.0
BN	KAY ELLIOTT	03-B32G-003.0
BO	KAY ELLIOTT	03-B32G-004.0
BP	LARRY M. & DEBORAH R. REED	03-B32G-005.0
BQ	LARRY M. & DEBORAH R. REED (SURVIVOR)	03-B32G-006.0
BR	ROBERT F. & ANNA OHLER	03-B32G-007.0
BS	JOHN H. FOX	03-B32G-008.0
BT	JAMES E. & ANNETTE M. BEST	03-B32G-009.0
BU	JAMES E. & ANNETTE M. BEST	03-B32G-010.0
BV	MATTHEW PATRICK TOMSHACK	03-B32G-011.0
BW	MATTHEW PATRICK TOMSHACK	03-B32-088.0
BX	SUSAN A. FODOR	03-B32-089.0
BY	MICHAEL & DELLA SEREVICZ	03-B32-090.0
BZ	SAMUEL HERVEY HUBBARD	03-B32-096.0
CA	PATRICIA WILLIAMS	03-B32-134.0
CB	PATRICIA WILLIAMS	03-B32-198.0
CC	STEVEN & HEIDI SARACCO	03-B32-197.0
CD	WESLEY M. RINE	03-B32-196.0
CE	WESLEY M. RINE	03-B32-195.0
CF	CHARLES W. & TAMMY S. WAGNER (SURVIVOR)	03-B32-193.0
CG	DAVID L. & JULIE A. HALL	03-B32-136.0
CH	DAVID L. & JULIE A. HALL	03-B32-137.0
CI	DAVID L. & JULIE A. HALL	03-B32-138.0
CJ	KEVIN R. & SANDRA A. COLLINS	03-B32-130.1
CK	DAVID L. & JULIE A. HALL	03-B32-137.1
CL	HAMMOND PUBLIC SERVICE DISTRICT	03-B32-135.0
CM	BERNARD L. JR & DONNA J. MILLER	03-B32-132.0
CN	BERNARD L. MILLER JR	03-B32-131.0
CO	JOSEPH C. & PENNY J. MORRIS	03-B32-129.0
CP	VINCENT & PHILLIP MAZZELLA	03-B32-128.0
CQ	VINCENT & PHILLIP MAZZELLA	03-B37-046.0
CR	DONNA A. MAZZELLA	03-B37-047.0
CS	SHELBY L. CARRELL, BONNIE LEE LUKACENA, EDWARD O'DYER, PAIGE ELIZABETH ROLLINS, JULIE SHEY SCHUETZNER, SHANON SCHUETZER, SHAYNE SCHUETZNER, CHERI A. SHARPE	03-B37-048.0
CT	DWARKA NATH VEMURI DBA AMERICAN HEART ASSOCIATES	03-B37-047.0
CU	WILLIAM E. & HAZEL M. JOHNSTON JTWR0S	03-B37-053.1
CV	BUFFALO CREEK CAMP	03-B37-51.0
CW	MARLIN G. SR & JOY CRAWFORD (SURVIVOR)	03-B37-055.0
CX	JOHN E. & SHERRIL J. RIPLEY	03-B37-062.0
CY	JOSEPH K. & GLORIA JEAN BOWMAN	03-B37-070.0
CZ	JOSEPH K. & GLORIA JEAN BOWMAN	03-B37-067.1
DA	WILLIAM E. & HAZEL E. JOHNSTON JTWR0S, CAROLE & WOODROW W. SILVER JR (L/E), PAULA K. SILVER (L/E)	03-B37-047.0
DB	WILLIAM E. & HAZEL E. BERTY JOHNSTON JTWR0S	03-B37-074.1
DC	JAMES L. & SONDR A. K. ELLIOT	03-B37-071.0
DD	ROBIE & GERTRUDE LOUISE MCSHANE	03-B32-030.0
DE	HAMMOND PUBLIC SERVICE DISTRICT	03-B32-194.1
DF	HAMMOND PUBLIC SERVICE DISTRICT	03-B37-045.1

REVISIONS:	COMPANY:	 	
	OPERATOR'S	ROBERT BONE	
	WELL #:	BRK 5H	
	DISTRICT:	COUNTY:	STATE:
	BUFFALO	BROOKE	WV
		DATE:	06-04-2020
		DRAWN BY:	R. GRIMES
		SCALE:	N/A
		DRAWING NO.:	2017-219

WW-6A1  
(5/13)

Operator's Well No. Robert Row 2012

**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

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: [Signature]

Its: Staff [Signature]

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  
 Robert Bone BRK 5H  
 Brooke County, West Virginia

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EXHIBIT A

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 Robert Bone BRK 5H  
 Brooke County, West Virginia

#	TMP	LESSOR	LESSEE	ROYALTY	BK/PG
1)	03-0B37-0081-0000-0000	Robert O. Bone	Chesapeake Appalachia, LLC SWN Production Company, LLC	14.00%	10/424 30/480
2)	03-0B37-0050-0000-0000	John L. Latimer and Angela Latimer, and Deborah Starr	Great Lakes Energy Partners  Range Resources - Appalachia, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	14.00%	9/713  20/733 10/552 30/480
		William E. Johnston and Hazel E. Johnston	Chesapeake Appalachia, LLC	18.00%	12/298
3)	03-0B37-0045-0000-0000	Schiappa Mary 74 Trust f/b/o Huberta A Siciliano JP	SWN Production Company, LLC Chesapeake Appalachia, LLC	20.00%	30/480 10/470
		Schiappa Mary 74 Trust f/b/o Teresa Schiappa	SWN Production Company, LLC Chesapeake Appalachia, LLC	20.00%	30/480 10/469
4)	03-0B37-0043-0000-0000	John A. McCreary and Barbara A. McCreary, husband and wife	SWN Production Company, LLC Great Lakes Energy Partners	12.50%	30/480 10/94
			Range Resources - Appalachia, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC		20/733 10/552 30/480
5)	03-0B32-0130-0000-0000	Ina Grace Walker, a widow	Chesapeake Appalachia, LLC	18.00%	18/254
		James C. Ditty, a widower	SWN Production Company, LLC Chesapeake Appalachia, LLC	18.00%	30/480 18/265

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	Marilyn McCord, a widow and remarried	SWN Production Company, LLC	Chesapeake Appalachia, LLC	18.00%	30/480 18/309
	Nila Helen Boyd, widow and remarried	SWN Production Company, LLC	Chesapeake Appalachia, LLC	18.00%	30/480 18/314
	John Cheffy McCord III and Patricia McCord	SWN Production Company, LLC	Chesapeake Appalachia, LLC	18.00%	30/480 18/319
	Clinton Douglas McCord and Christy A. McCord	SWN Production Company, LLC	Chesapeake Appalachia, LLC	18.00%	30/480 18/498
	Carolyn Ann Ward, f/k/a Carolyn Ann McCord Jones, a widow and remarried	SWN Production Company, LLC	Chesapeake Appalachia, LLC	18.00%	30/480 18/579
	Ralph Johnston	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	30/480 35/427
	Robert Johnston	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	35/416
	Daniel Johnston	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	35/223
	Kenneth Johnston	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	35/229
	Brian Johnston	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	35/241
	Joyce A. Brady	SWN Production Company, LLC	SWN Production Company, LLC	18.00%	35/235
6)	Marilyn Rosetta McCord, single	Great Lakes Energy Partners		12.50%	10/55, 27/118
	Range Resources - Appalachia, LLC				20/733
	Chesapeake Appalachia, LLC				10/552
	SWN Production Company, LLC				30/480
	Ina Grace Walker, a widow	Chesapeake Appalachia, LLC		18.00%	18/254
	SWN Production Company, LLC				30/480

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 Robert Bone BRK 5H  
 Brooke County, West Virginia

7)	03-0B32-0192-0000-0000	James C. Ditty, a widower Edward C. Zatta a/k/a Ed Zatta and Susan Zatta	Chesapeake Appalachia, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00% 18.00%	18/265 30/480 17/499
8)	03-0B32-0192-0000-0001	Edward C. Zatta a/k/a Ed Zatta and Susan Zatta	Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00%	17/499 30/480
9)	03-0B32-0194-0000-0000	James R. Johnson Jr and Lura M. Johnson f/k/a Lura Hoit Benita A. Stroop Jeannetta Margrave Kent Wellman	Chesapeake Appalachia, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	18.00% 14.00% 14.00% 14.00%	18/129 30/480 39/705 38/717 38/711
10)	03-0B32-0191-0000-0000	Donald C Burkhardt	Chesapeake Appalachia, LLC SWN Production Company, LLC	14.00%	10/726 30/480
11)	03-0B32-0190-0000-0000	David McGowan and Cheryl L. McGowan, husband and wife	Chesapeake Appalachia, LLC	18.00%	19/73
12)	03-0B32-0188-0000-0000	Robert G Tredway Jr, divorced	SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC SWN Production Company, LLC SWN Production Company, LLC	12.50% 12.50% 12.50% 12.50% 12.50%	26/585 30/480 26/511 33/492 26/516 33/492
13)	03-0B32-0009-0000-0000	Schiappa and Company	SWN Production Company, LLC	15.50%	33/356
14)	03-0B32-0010-0000-0000	Schiappa and Company	SWN Production Company, LLC	15.50%	33/356
15)	03-0B32-0029-0000-0000	Gertrude Louise McShane Robie and Richard Robert Robie	SWN Production Company, LLC	18.00%	33/605

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 Brooke County, West Virginia

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16)	03-0B27-0017-0000-0000	Gertrude M. Nichols Burns Shawn Catlin and Lisa Catlin Frank Eugene Cominotti John A. Cominotti Robert John Gierke Carol Lynn Gierke Harms Sandra Gierke Kaplafa Lisa M. Brichta William Moran and Josie Lynn Moran	SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC	18.00% 14.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	33/452 24/37, 24/420 30/480 25/377 30/480 23/630, 24/425 30/480 33/613 33/457 33/442 35/691 23/635, 24/181
17)	03-0B32-0025-0000-0000	Nelson Campbell Nicholls, III Galen H Smith Jr Bonnie Smith Robert Joseph Smith Lisa J. Packard and William Packard Phyllis Gierke Wheeler Rita K Wineman Violet L. Coss	SWN Production Company, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC Chesapeake Appalachia, LLC SWN Production Company, LLC	18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00% 18.00%	30/480 33/447 25/372 30/480 34/333, 35/134 24/42, 24/171 30/480 33/618 33/462 24/32, 24/176 30/480 11/678 30/480
18)	03-0B27-0012-0000-0000	HFS Limited Liability Company	Chesapeake Appalachia, LLC	18.00%	15/394 30/480
19)	03-0B27-0004-0000-0000	HFS Limited Liability Company	Chesapeake Appalachia, LLC	18.00%	15/394 30/480
20)	State Route 2	RIGHT OF WAY ONLY			

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 Robert Bone BRK 5H  
 Brooke County, West Virginia

21)	03-0B27-0012-0000-0000	HFS Limited Liability Company	Chesapeake Appalachia, LLC	18.00%	15/394
			SWN Production Company, LLC		30/480
22)	03-0B27-0011-0000-0000	West Virginia Department of Transportation, Division of Highways	SWN Production Company, LLC	20.00%	55/301
23)	03-0B27-0010-0000-0000	HFS Limited Liability Company	Chesapeake Appalachia, LLC	18.00%	15/394
			SWN Production Company, LLC		30/480
24)	Ohio River	State of West Virginia, Department of Commerce, Division of Natural Resources	SWN Production Company, LLC	20.00%	55/479

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

July 18, 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: Robert Bone BRK 5H in Brooke County, West Virginia, Drilling under Greens Run Road, Kimlin Run Road, McCord Hill Road and State Route 67.

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 Greens Run Road, Kimlin Run Road, McCord Hill Road and State Route 67. 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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