

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

9331'

(2,000' SCALE) LATITUDE: 40°12'30" SURFACE HOLE-

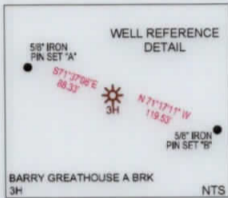
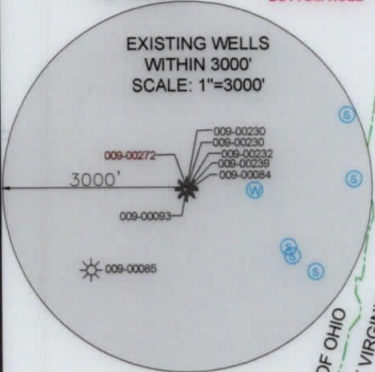
2966'



www.jhacompanies.com

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

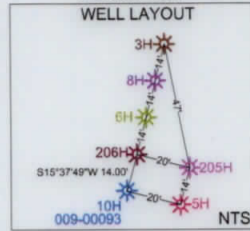
EXISTING WELLS
WITHIN 3000'
SCALE: 1"=3000'



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.

WELL LAYOUT



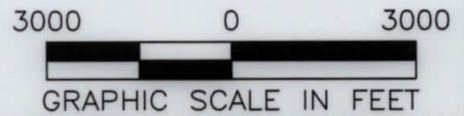
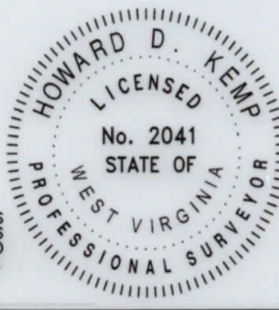
GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

LINE	BEARING	DISTANCE
L1	S14°50'40"W	1083.90'
L2	N33°38'50"W	1144.24'

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4449087.59 EASTING: 531016.69
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448965.04 EASTING: 530861.47
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452793.55 EASTING: 529061.57
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4449087.59 EASTING: 531016.69
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4449022.10 EASTING: 530831.30
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452793.72 EASTING: 529061.68

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 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 SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)

OPERATOR'S WELL #: 3H

API WELL #: 47 STATE, 009 COUNTY, 272 PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1136.9'

DISTRICT: BUFFALO COUNTY: BROOKE QUADRANGLE: TILTONSVILLE, OH-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) AS-DRILLED

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,816' TVD 19967' TMD

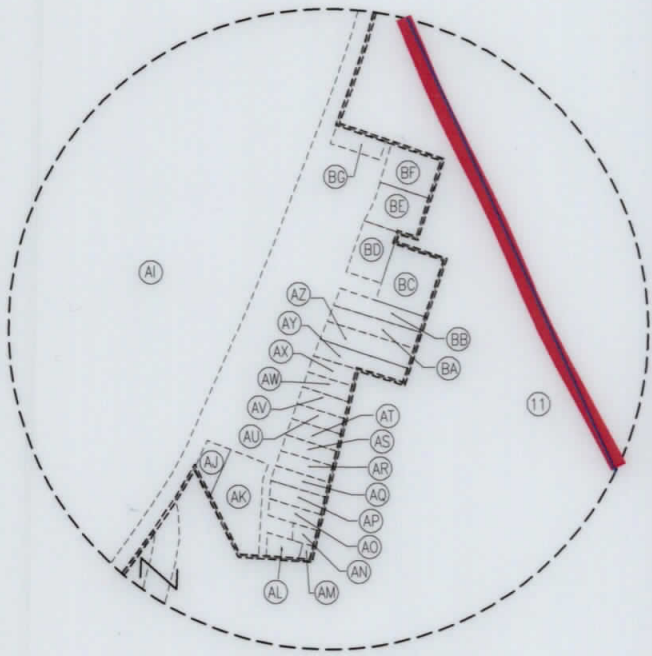
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY

ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201

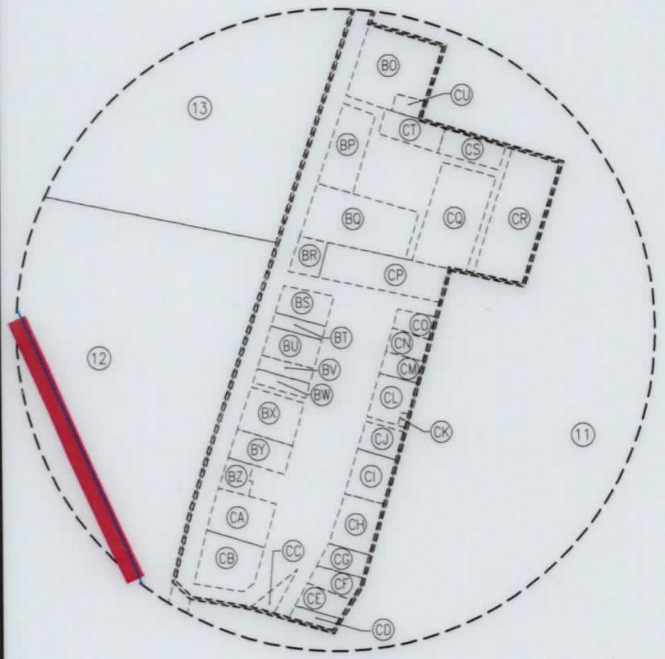
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	REVISIONS:	DATE:
● EXISTING BOTTOM HOLE		11-18-2019
⊛ EXISTING / PRODUCING WELLHEAD		
LPL* EXISTING LANDING POINT LOCATION		
● PROPOSED SURFACE HOLE / BOTTOM HOLE		
LPL* PROPOSED LANDING POINT LOCATION		
— ACCESS ROAD		
— PUBLIC ROAD		
— FLOOD PLAIN		
— LEASE BOUNDARY		
— AS-DRILLED PATH		
— PROPOSED PATH		

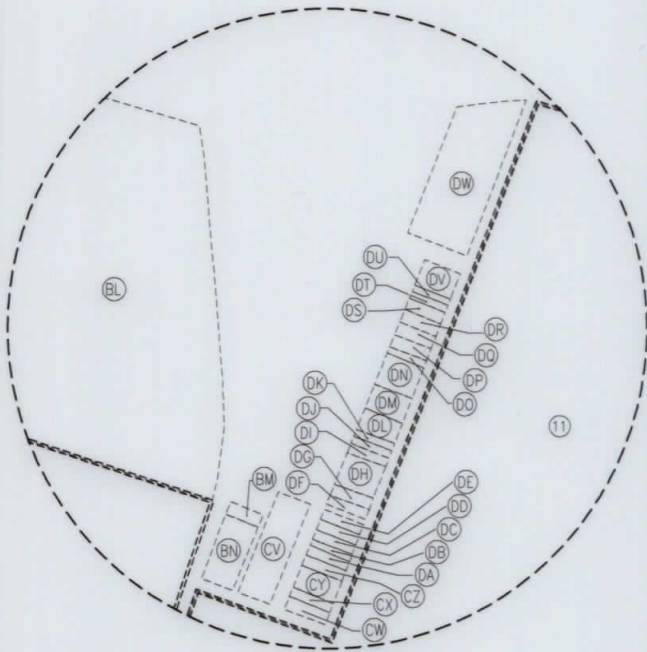
DETAIL "A"
NTS



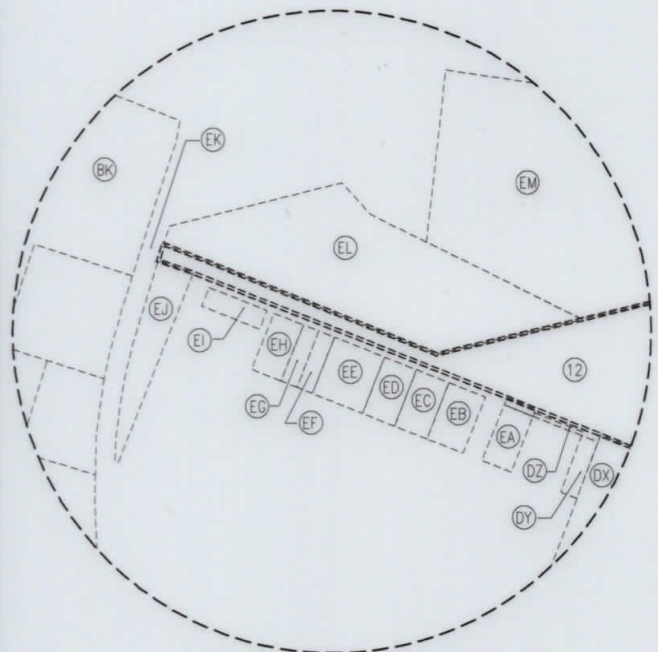
DETAIL "B"
NTS



DETAIL "C"
NTS



DETAIL "D"
NTS



REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN *R-V+*
Production Company™

OPERATOR'S
WELL #:

BARRY GREATHOUSE A BRK
3H

DATE: 11-18-2019

DISTRICT:
BUFFALO

COUNTY:
BROOKE

STATE:
WV

DRAWN BY: R.GRIMES
SCALE: N/A
DRAWING NO: 2017-422
WELL LOCATION PLAT

PROPERTY NUMBER 2501166087
PAD ID 3001156331

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
SURFACE OWNER		
2	ROBERT J. MILLER, JR. & LINDA M. MILLER	03-841-0047.0000
3	WILLIAM & DAWNA MILLER	03-841-0061.0000
4	KARL DOUGLAS STEPHENS	03-841-0054.0002
5	DOROTHY S. MOORE	03-841-0054.0000
6	FRED W. YOUNG, JR.	03-841-0054.0001
7	WINDSOR COAL COMPANY	03-841-0039.0000
8	WINDSOR COAL COMPANY	03-841-0048.0000
9	WINDSOR COAL COMPANY	03-836-0102.0000
10	WINDSOR COAL COMPANY	03-836-0101.0000
11	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0023.0001
12	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836K-0013.0000
13	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836F-0077.0000
14	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0024.0000
15	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0117.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
CO	BRUCE & DEBBI SELMON	01-836F-0086.0000
CR	BRUCE & DEBBI SELMON	01-836F-0085.0000
CS	TERRY LYNN LULLY	01-836F-0084.0000
CT	GEORGE W. & CHARLOTTE BARNHART	01-836F-0081.0000
CU	GEORGE W. & CHARLOTTE BARNHART	01-836F-0079.0000
CV	JAC FRED W.V. LLC, A NORTH CAROLINA LLC	01-836F-0026.0000
CW	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0076.0000
CK	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0075.0000
CY	SHELBY L. CASTO	01-836F-0074.0000
CZ	SHELBY L. CASTO	01-836F-0073.0000
DA	PHYLLIS MARKER	01-836F-0072.0000
DB	GLENN T. & CAROLYN MOORE	01-836F-0071.0000
DC	CARDOLYN K. MOORE	01-836F-0070.0000
DD	JEFFREY & CHERYL WEEKLEY	01-836F-0069.0000
DE	JEFFREY L. STOLLAR	01-836F-0068.0000
DF	JUNE E. MORRELL	01-836F-0067.0000
DG	JUNE E. MORRELL	01-836F-0066.0000
DH	SHIRLEY M. RYNAWEC	01-836F-0065.0000
DI	ALLEN KEITH & CAROLE YANRLING	01-836F-0064.0000
DJ	JUNE E. MORRELL	01-836F-0063.0000
DK	EDWARD A. POLAND	01-836F-0062.0000
DL	LELAND J. & TRACEY A. DICKINSON	01-836F-0061.0000
DM	THE VILLAGE OF BEECH BOTTOM	01-836F-0060.0000
DN	JOYCE L. PAINTER	01-836F-0059.0000
DO	JANET L. RICHARDSON	01-836F-0058.0000
DP	JANET L. RICHARDSON	01-836F-0057.0000
DQ	JANET L. RICHARDSON	01-836F-0056.0000
DR	JANET L. RICHARDSON	01-836F-0055.0000
DS	JANET L. RICHARDSON	01-836F-0054.0000
DT	MONONGAHELA POWER COMPANY	01-836F-0053.0000
DU	LARRY W. GRIMES	01-836F-0052.0000
DV	LARRY W. GRIMES	01-836F-0051.0000
DW	BOARD OF EDUCATION	01-836B-0106.0000
DX	THE VILLAGE OF BEECH BOTTOM	01-836B-0017.0000
DY	THE VILLAGE OF BEECH BOTTOM	01-836B-0016.0000
EZ	JUSTIN & AMANDA SMART	01-836B-0013.0000
EA	GEORGE W. & JUDY LEWIS	01-836B-0014.0000
EB	BELINDA DAUGHERTY ETAL	01-836B-0011.0000
EC	BARBARA MCCUTCHAN	01-836B-0010.0000
ED	WILLIAM B. CAIN JR. & ELIZABETH N. CAIN	01-836B-0009.0000
EE	SHEILA ANN LAZEAR	01-836B-0008.0000
EF	SHEILA ANN LAZEAR	01-836B-0007.0000
EG	JOHN C. & KELLY A. RICHE	01-836B-0006.0000
EI	JOHN C. & KELLY A. RICHE	01-836B-0005.0000
EJ	PATRICK J. DALBO	01-836B-0002.0000
EJ	THE VILLAGE OF BEECH BOTTOM	01-836B-0001.0000
EK	STATE ROUTE #2	RIGHT OF WAY
EL	JOYCE A. SMITH	01-836B-0120.0000
EM	EMASES PROPERTIES, LLC	01-836B-0121.0001
EN	LARRY WILLIAM COUCH	01-836B-0124.0000
EO	EDWARD A. CONERY	01-836B-0125.0000
EP	LOUIS & ARLINE MILLER	03-836-0005.0000
EQ	LOUIS & ARLINE MILLER	03-836-0006.0000
ER	ELVINA WELLS BUCHEY & ET AL	03-831-0074.0000
ES	BERNARD J. LOMBARDO III	03-931-0081.0000
ET	STEPHEN A. FODOR & JUDY L. BROWNLEE	03-836-0176.0000
EU	JOHN R. HOFFMAN & ALICE J. BUCHANAN	03-836-0175.0000
EV	PAUL D. & KIMBERLY D. LEONARD	03-836-0173.0000
EW	BRANNON P. & EMILY M. LEONARD	03-836-0172.0000
EX	BRANNON P. & EMILY M. LEONARD	03-836-0171.0000
EY	HARLEY J. LEMASTERS	03-836-0170.0000
EZ	HARLEY J. LEMASTERS	03-836G-0047.0000
FA	HARLEY J. LEMASTERS	03-836G-0046.0000
FB	HARLEY J. LEMASTERS	03-836G-0045.0000
FC	HARLEY J. LEMASTERS	03-836G-0044.0000
FD	HARLEY J. LEMASTERS	03-836G-0043.0000
FE	HARLEY J. LEMASTERS	03-836G-0042.0000
FF	HARLEY J. LEMASTERS	03-836G-0041.0000
FG	LESTER & KATHERINE WALLACE	03-836G-0001.0000
FH	TONYA S. LOWE	03-836L-0011.0000
FJ	JEFFERY M. & KRISTINA L. BARR	03-836L-0011.0001
FJ	AMANDA HUFF	03-836L-0017.0000
FK	CONNIE WAGNER	03-836L-0015.0000
FL	BRIAN D. & CASEY K. RICHARDSON	03-836L-0021.0001
FM	WINDSOR COAL COMPANY	03-836L-0021.0000
FN	FLOYD R. & DORIS M. LOUQUIE	03-836L-0032.0000
FO	WINDSOR COAL COMPANY	03-836L-0036.0000
FP	WINDSOR COAL COMPANY	03-836-0103.0000
FQ	BROOKE COUNTY COMMISSION	03-836-0103.0001
FR	WINDSOR COAL COMPANY	03-841-0049.0000
FS	ERNEST F. & JOANNE CAPP	03-841-0052.0000
FT	SCOTT A. & SANDRA J. SANDRETH	03-841-0050.0000
FU	DUSTIN DAVID & MARY ELIZABETH WHITE	03-841-0051.0000
FV	ERNEST F. & JOANN P. CAPP	03-841-0053.0000
FW	MARGARET E. CIOPELLETTI	03-841-0061.0008
FX	ERIC CONRAD & WILDA P. FREELAND	03-841-0055.0000
FY	WILLIAM & DAWNA MILLER	03-841-0061.0002
FZ	KEVIN S. WEEKLEY	03-841-0056.0000
GA	MICHAEL PAUL ALLEN	03-841-0061.0003
GB	ERNEST F. & JOANN P. CAPP	03-841-0061.0001
GC	ERNEST F. & JOANN P. CAPP	03-841-0062.0000
GD	ERNEST F. & JOANN P. CAPP	03-841-0063.0000
GE	EMILY J. HUFFNER	03-841-0065.0001
GF	CARL & JUDITH SPENCER	03-841-0065.0000
GG	ERNEST F. & JOANNE CAPP	03-841-0064.0000
GH	COREY CONLEY	03-841-0061.0005
GI	ROBERT LEE & DELMA LOU HUFFMAN	03-841-0067.0000
GJ	CARL E. & JUDITH SPENCER	03-841-0066.0000
GK	SANDRA W. BUTLER	03-841-0061.0004
GL	SANDRA W. BUTLER	03-841-0068.0000
GM	SANDRA W. BUTLER	03-841-0069.0000
GN	SANDRA W. BUTLER	03-841-0071.0000
GO	JAY GLEN COLLINS	03-841-0080.0000
GP	DALE T. & MARY R. WOOD	03-841-0084.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	DANNY GENE BRITT AND VIRGINIA MARGARET BRITT	03-846-0027.0000
B	BETTY F. DOPKO	04-R5-0001.0000
C	STACY A. GREATHOUSE HAYMAN AND PATRICIA A. GREATHOUSE	03-846-0041.0000
D	BARRY L. & PATRICIA A. GREATHOUSE	03-841-0083.0000
E	BARRY L. & PATRICIA A. GREATHOUSE	03-841-0032.0000
F	CHARLES BELL ESTATE	03-841-0031.0000
G	ROSEMARY KINDER MOORE	03-841-0035.0000
H	RAY PAUL NICOLAN	03-841-0042.0000
I	JOY ANN & EBBIE J. SCHUETZ	03-841-0046.0000
J	JOY ANN & EBBIE J. SCHUETZ (SURV)	03-841-0045.0000
K	JOY ANN SCHUETZ	03-841-0043.0000
L	JAMES HANCHER	03-841-0044.0000
M	SYLVESTER & MARY KELLER (SURV)	03-841-0038.0000
N	WINDSOR COAL COMPANY	03-841-0005.0000
O	WINDSOR COAL COMPANY	03-841-0007.0000
P	WINDSOR COAL COMPANY	03-836-0091.0000
Q	WINDSOR COAL COMPANY	03-836-0100.0000
R	WINDSOR COAL COMPANY	01-8836-0022.0000
S	WINDSOR COAL COMPANY	01-8836-0025.0000
T	MARY LOUISE MCALLISTER	01-8836-0020.0000
U	LEITHA ADAMSON	01-8836-0019.0000
V	RALPH & MARY ANN PLANTS	01-8836-0004.0000
W	PAUL & GENEVEVE CUNNINGHAM	01-8836-0017.0000
X	PAUL & GENEVEVE CUNNINGHAM	01-8836-0016.0000
Y	FRANKLIN MILLER	01-8836-0015.0000
Z	FRANKLIN MILLER	01-8836-0014.0000
AA	FRANKLIN MILLER	01-8836-0013.0000
AB	FRANKLIN MILLER	01-8836-0012.0000
AC	FRANKLIN & CONNIE J. MILLER	01-8836-0011.0000
AD	FRANKLIN & CONNIE J. MILLER	01-8836-0010.0000
AE	CHERYL E. SMITH	01-8836-0009.0000
AF	STEVEN ANDREW & DEBBIE MURDOCK	01-8836-0008.0000
AG	DANIEL L. & CATHY J. JOHNSTON	01-8836-0007.0000
AH	LELAND J. & TRACEY A. DICKINSON	01-8836-0006.0000
AI	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0001.0000
AJ	CHRISTOPHER DEAN	01-836K-0030.0000
AK	CHARLES G. & CHRISTINE L. HOOD	01-836K-0031.0000
AL	CHARLES G. & CHRISTINE L. HOOD	01-836K-0050.0003
AM	JAMES D. MEADOWS	01-836K-0050.0001
AN	JAMES D. MEADOWS	01-836K-0050.0002
AO	MARK L. & SHARON KAY JORDAN	01-836K-0050.0000
AP	MARK L. & SHARON KAY JORDAN	01-836K-0049.0000
AQ	JOHN E. & VIOLET E. CORSO	01-836K-0048.0000
AR	JOHN E. & VIOLET E. CORSO	01-836K-0047.0000
AS	JOHN E. & VIOLET E. CORSO	01-836K-0046.0000
AT	AYLSSA R. NEGRE	01-836K-0045.0000
AU	AYLSSA R. NEGRE	01-836K-0044.0000
AV	JOHN MILLER	01-836K-0043.0000
AW	DONALD & ROSEMARIE MEADOWS	01-836K-0042.0000
AX	PAUL A. & MARY R. NEGRE	01-836K-0041.0000
AY	MORRIS W. BLEAU	01-836K-0040.0000
AZ	ALICE M. TAYLOR	01-836K-0039.0000
BA	JESSE MCKEE	01-836K-0038.0000
BB	LINDA DARLIN SPENCER	01-836K-0037.0000
BC	MARISSA J. & ROBERT B. FORSHEY	01-836K-0036.0000
BD	DONALD E. & PATRICIA A. DILBERT	01-836K-0034.0000
BE	MARISSA J. FORSHEY	01-836K-0033.0000
BF	MARISSA J. FORSHEY	01-836K-0032.0000
BG	WANDA S. JONES	01-836K-0014.0000
BH	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-8836-0023.0000
BI	OHIO RIVER (STATE OF WEST VIRGINIA)	OHIO RIVER
BJ	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0116.0000
BK	BROWNLEE LAND VENTURES, LP	01-836B-0115.0000
BL	BUSINESS DEV CORP OF THE NORTHERN PANHANDLE	01-836B-0119.0000
BM	MARK T. SVETIC	01-836F-0024.0000
BN	MARK T. SVETIC	01-836F-0025.0000
BO	C & P TELEPHONE COMPANY OF WEST VIRGINIA	01-836F-0078.0000
BP	JAMES B. LANDWEHR SR.	01-836F-0080.0000
BQ	LINDA M. LEMASTERS	01-836F-0087.0000
BR	AMY N. FREY	01-836F-0088.0000
BS	GILBERT FEZER	01-836F-0103.0000
BT	WANDA MARLENE SAYRE	01-836F-0104.0000
BU	WANDA MARLENE SAYRE	01-836F-0105.0000
BV	WANDA MARLENE SAYRE	01-836F-0106.0000
BW	WANDA MARLENE SAYRE	01-836F-0107.0000
BX	WANDA MARLENE SAYRE	01-836F-0108.0000
BY	RENEE M. ALLMAN	01-836F-0109.0000
BZ	MILDRED M. HUNT, ESTATE	01-836F-0110.0000
CA	DENNIS RUSCHEL	01-836K-0001.0000
CB	DENNIS RUSCHEL	01-836K-0002.0000
CC	VILLAGE OF BEECH BOTTOM	01-836K-0003.0000
CD	DOLORES VIRGINIA COEN	01-836K-0012.0000
CE	VILLAGE OF BEECH BOTTOM	01-836K-0011.0000
CF	CURTIS D. & TINA L. OSSMAN	01-836K-0010.0000
CG	LINDA CDX	01-836K-0009.0000
CH	WILLIAM JONES	01-836K-0008.0000
CJ	NICHOLAS RYNAWEC	01-836F-0096.0000
CJ	GARY EDWARD & CONSTANCE L. LEONARD	01-836F-0095.0000
CK	VILLAGE OF BEECH BOTTOM	01-836F-0094.0000
CL	WILLIAM E. & DEBRA L. LEONARD	01-836F-0093.0000
CM	TARA D. SUTER	01-836F-0092.0000
CN	TARA D. SUTER	01-836F-0091.0000
CO	JOHN ESKEY	01-836F-0090.0000
CP	AMY N. FREY	01-836F-0089.0000

REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN^{REVISED}
Production Company™

OPERATOR'S

BARRY GREATHOUSE A BRK

DATE: 11-18-2019

WELL #:

3H

DRAWN BY: R.GRIMES

DISTRICT:
BUFFALO

COUNTY:
BROOKE

STATE:
WV

SCALE: N/A

DRAWING NO: 2017-422

WELL LOCATION PLAT
PROPERTY NUMBER 2501166087
PAD ID 3001156331