

LATITUDE: 40°22'30" BOTTOM HOLE

10444'

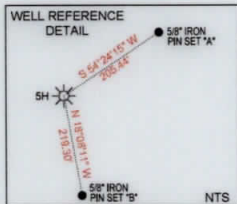
LATITUDE: 40°22'30" SURFACE HOLE

7754'

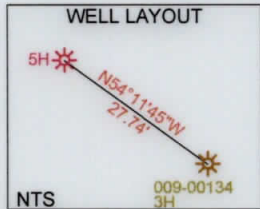


www.jhacompanies.com

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



LINE	BEARING	DISTANCE
L1	S07°41'32"W	690.98'
L2	S34°04'59"E	1255.73'



2000 0 2000

GRAPHIC SCALE IN FEET

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465699.98 EASTING: 540102.20
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465803.77 EASTING: 540293.72
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4468438.91 EASTING: 539264.01
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465699.98 EASTING: 540102.20
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465802.91 EASTING: 540280.02
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4468422.76 EASTING: 539266.31

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



NOTES ON SURVEY

- COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- 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.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

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

LONGITUDE: -80°30'00" SURFACE HOLE

3468'

LONGITUDE: -80°30'00" BOTTOM HOLE



(+) 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)

SWN Production Company, LLC
SWN Production Company™

STATE OF WV DNR B BRK
OPERATOR'S WELL #: 5H
API WELL #: 47 009 00252
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO NORTH ELEVATION: 1,201.1'

DISTRICT: CROSS CREEK COUNTY: BROOKE QUADRANGLE: STEUBENVILLE EAST, OH

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

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: 5,673' TVD 15,487' 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:
PROPOSED SURFACE HOLE / BOTTOM HOLE		05-29-2019
EXISTING / PRODUCING WELLHEAD		API NO: 47-009-00252
LPL* LANDING POINT LOCATION	SURVEYED BOUNDARY	DRAWN BY: D. REED
EXISTING WATER WELL	LEASE BOUNDARY	SCALE: 1" = 2000'
EXISTING SPRING	AS-DRILLED PATH	DRAWING NO: 2017-541
	PROPOSED PATH	WELL LOCATION PLAT

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION (S/R)	04-CC16-019.0000
TRACT	SURFACE OWNER	TAX PARCEL
2	DEBORAH JANE HAMILTON	04-C12K-078.0000
3	MARGARET FRESHWATER	04-C12K-080.0000
4	BRYAN W. BRADLEY & BRADLEY AND SHARON R. REED	04-C12K-014.0000
5	PHILIP D. & TRACY MASSIMI	04-C12K-017.0000
6	PHILIP D. & TRACY MASSIMI	04-C12K-011.0000
7	BONNIE A. BULLOCK	04-C12K-010.0000
8	BONNIE A. BULLOCK	04-C12K-080.0001
9	JAMES K. & BARBARA MCVICKER II	04-C12K-006.0000
10	SANDRA ELAINE SUMMERS	04-C12K-005.0000
11	BONNIE A. BULLOCK	04-C12K-004.0000
12	PATRICK J. & VIVIAN L. HARVEY	04-C12K-003.0000
13	FREDERICK D. & RHONDA J. BOLEY	04-C12K-002.0000
14	KRISTOPHER J. MOFFIT	04-C12K-081.0000
15	THOMAS E. & MADOLINE K. MOFFITT	04-C12J-017.0000
16	PEARL ARIA	04-CC12-012.0000
17	PEARL ARIA	04-CC12-011.0000
18	DONNA MERRIFIELD & ROXANN L. ROBINSON	04-CC8N-079.0800

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION	04-CC16-0022.0000
B	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	04-CC16-0020.0000
C	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION	04-CC16-0021.0000
D	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION	04-CC16-017.0000
E	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	04-CC16-0018.0000
F	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	04-CC16-0023.0001
G	WEST VIRGINIA ST OF BUREAU DIV OF COMM DIV OF NAT RES PB LD	04-CC16-0011.0000
H	TIMOTHY BRIAN CUNNINGHAM	04-CC16-0015.0000
I	DANNY D. TICE & MARCIA TICE	04-CC16-016.0000
J	DAVID A. & GERALDINE DODD	04-CC12-0041.0000
K	JOHN D. & KAREN DUFFIELD	04-CC12-0040.0000
L	JOHN D. & KAREN DUFFIELD	04-CC12-0039.0000
M	LARRY G., SR. & NORA LOU DODD	04-CC12-0038.0000
N	RITA K. THOMAS	04-CC12-0055.0000
O	ALLEN & JENNIFER MONROE	04-CC12-0037.0000
P	GRACE A. & ELAINE M. MORRIS	04-CC12-0056.0000
Q	CROSS CREEK TENT CEMETERY ASSOCIATION	04-CC12-0057.0001
R	UNITED PRESBYTERIAN CHURCH	04-CC12-0057.0000
S	JOSEPH JOHN & FRANCIS ANN OLENICK	04-CC12-0058.0000
T	LANTZ KEYSTONE TRUST	04-C12J-0025.0000
U	JOANNE E. DOBRZANSKI	04-C12K-0012.0000
V	MARK J. IRVIN	04-C12K-0013.0000
W	CHARLOTTE A. VILGA	04-C12J-0023.0000
X	DONALD L. & LISA J. COZAD JR.	04-C12J-0022.0000
Y	WILLIAM WILLIS	04-C12K-0009.0000
Z	JAMES MICHAEL & HEATHER MARIE VOJVODICH	04-C12K-0008.0000
AA	KATHRYN J. FELICI	04-C12K-0001.0000
AB	THOMAS E. & MADELINE MOFFIT	04-C12J-0017.0000
AC	DIANE A. HOWELL & JEAN L. WALDEN	04-C12J-0018.0000
AD	JACK L. & MARJORIE C. COPENHAVER	04-C12J-0060.0000
AE	ALBERT VUILLER & SANDRA L. LABUTE	04-C12J-0016.0000
AF	JACK L. & MARJORIE C. COPENHAVER	04-C12J-0059.0000
AG	NANCY PETREL	04-C12J-0011.0000
AH	MICHAEL D. & LIANNA L. WADE	04-C12J-0015.0000
AI	WILLIAM COLUMBO	04-C12J-0009.0000
AJ	SHAUM M. WELSHANS	04-C12J-0008.0000
AK	WILLIAM COLUMBO	04-C12J-0007.0000
AL	WILLIAM L. & CHRISTINE M. MITCHELL	04-CC12-0003.0000
AM	SHARON LYNN DAVIS & MICHELLE RENEA	04-CC12-0004.0000
AN	GEORGE SCOTT RICE & AMY JOY MCGARY	04-CC12-0059.0000
AO	THOMAS J. & PAMELA K. SZYMANEK	04-CC12-0061.0000
AP	DORIS D. JONES	04-CC11-0078.0000
AQ	DONNA MERRIFIELD & ROXANN L. ROBINSON	04-CC12-0010.0000
AR	WEST VIRGINIA DEPT. OF HIGHWAYS	04-CC8N-0106.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AS	CHRISTOPHER S. & SARAH E. BAYARDI	04-CC8N-0079.0000
AT	RICHARD A. BAILEY	04-CC8N-0079.0006
AU	JOHN W. FOX	04-CC8N-0092.0000
AV	JOHN W. FOX	04-CC8N-0091.0000
AW	COLLIERS METHODIST CHURCH	04-CC8N-0090.0000
AX	UNITED METHODIST CHURCH	04-CC8N-0089.0000
AY	UNITED METHODIST CHURCH	04-CC8N-0088.0000
AZ	COLLIERS UNITED METHODIST CHURCH	04-CC8N-0087.0005
BA	MEIR DADDOUSH	04-CC8N-0083.0000
BB	CHRISTINE SIMMONS	04-CC8N-0082.0000
BC	CHRISTINE SIMMONS	04-CC8N-0081.0000
BD	COLLIERS VOLUNTEER FIRE DEPARTMENT	04-CC8N-0080.0000
BE	COLLIERS VOLUNTEER FIRE DEPARTMENT	04-CC8N-0079.0002
BF	COLUMBIA GAS	04-CC8N-0041.0000
BG	COLLIERS VOLUNTEER FIRE DEPARTMENT	04-CC8N-0042.0000
BH	COLLIERS VOLUNTEER FIRE DEPARTMENT	04-CC8N-0079.0001
BI	GEORGE M. ATEN	04-CC8N-0043.0000
BJ	GEORGE M. ATEN	04-CC8N-0078.0000
BK	PATRICK & NORA K. BOYLES	04-CC8N-0072.0000
BL	ETHAN R. HARRIS	04-CC8N-0072.0001
BM	DEBRA LYNN ROCCHIO	04-CC8N-0068.0000
BN	MARK FORRESTER	04-CC8N-0053.0000
BO	JAMES R. BINGIEL	04-CC8N-0064.0000
BP	JAMES R. BINGIEL	04-CC8N-0063.0000
BQ	MICHAEL E. & HEATHER S. BAGGUS	04-CC8N-0054.0000
BR	ERIC J. & LORI A. ROBEY	04-CC8N-0051.0000
BS	JOANNA MARLEEN AYERS	04-CC8N-0047.0000
BT	JOANNA MARLEEN AYERS	04-CC8N-0046.0000
BU	PEARL ARIA	04-CC8N-0002.0000
BV	HARLEY WARRICK	04-C12F-0014.0000
BW	BONNIE A. BULLOCK	04-C12F-0018.0000
BX	BONNIE A. BULLOCK	04-C12F-0019.0000
BY	FRED WELSHANS JR. & CHRIS E. WELSHANS	04-C12K-0025.0000
BZ	CHARLES LEROY & MARCIA JOAN RICHTER	04-C12K-0024.0000
CA	WARREN RAY & CHERYL L. JOHNSON	04-C12K-0018.0000
CB	WARREN RAY & CHERYL L. JOHNSON	04-C12K-0016.0000
CC	JAMIE LEE & DANNALYN VAN HORN	04-C12K-0015.0000
CD	ROBERT C. & BARBARA A. HASPEL	04-C12K-0019.0000
CE	FRED WELSHANS JR. & CHRIS E. WELSHANS	04-C12K-0030.0000
CF	KEITH L. & FRANCES RICE	04-C12K-0031.0000
CG	KEITH L. & FRANCES RICE	04-C12K-0032.0000
CH	ALLEN JOHNSON & CHARLES WARREN ETAL	04-C12K-0033.0000
CI	CHARLES & LINDA SCOPEL	04-C12K-0034.0000
CJ	TERRY L. & SUSAN F. WELCH	04-C12K-0041.0000
CK	RICHIE W. & THELMA A. MILLS	04-C12K-0042.0000
CL	RICHARD ALVIN ZAMBARDA	04-C12K-0043.0000
CM	MARGARET FRESHWATER	04-C12K-0075.0000
CN	KEITH E. & JODY L. CARPENTER	04-C12K-0077.0000
CO	GOULD FAMILY TRUST OF 2013	38-0008-0018.0000
CP	ARTHUR C. MCDERMIT	38-0008-0007.0001

REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN ^{R+V+}
Production Company™

OPERATOR'S

STATE OF WV DNR B BRK

WELL #:

5H

DISTRICT:

CROSS CREEK

COUNTY:

BROOKE

STATE:

WV

DATE: 05-29-2019

API NO: 47-009-00252

DRAWN BY: D. REED

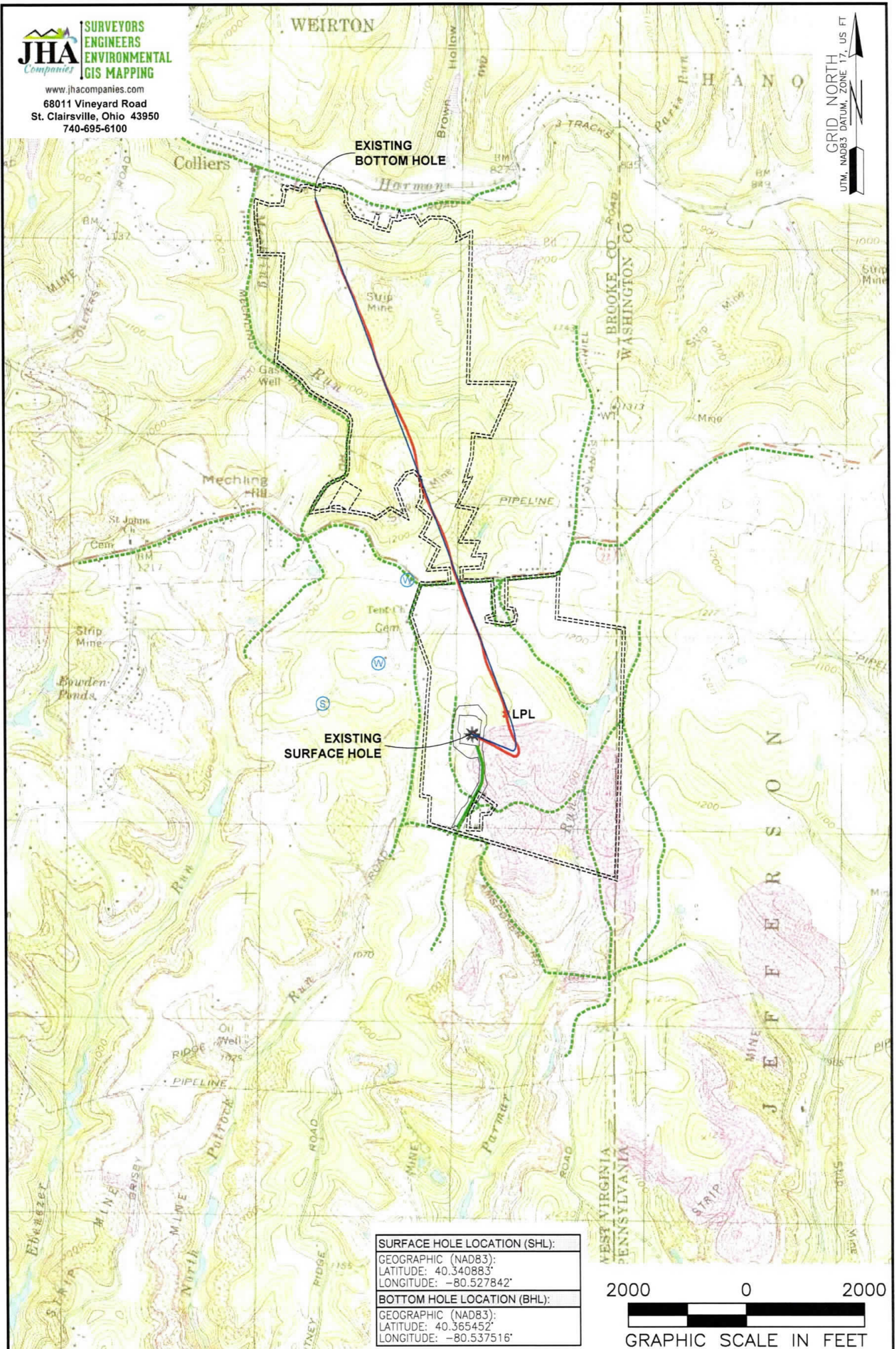
SCALE: N/A

DRAWING NO: 2017-541

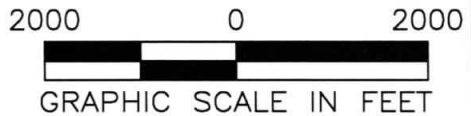
WELL LOCATION PLAT

PROPERTY NUMBER 2501166552

PAD ID 3001155614



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.340883°
LONGITUDE: -80.527842°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.365452°
LONGITUDE: -80.537516°



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
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: STATE OF WV DNR B BRK	WELL # 5H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY - CODE: BROOKE - 009	DISTRICT: CROSS CREEK	API NO: 47-009-00252
SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR	USGS 7 1/2 QUADRANGLE MAP NAME: STEBUENVILLE EAST, OH		