

(2,000' SCALE) LATITUDE: 40°20'00" SURFACE HOLE 9784'

(2,000' SCALE) LATITUDE: 40°22'30" BOTTOM HOLE

1358'

JHA SURVEYORS
ENGINEERS
ENVIRONMENTAL
GIS MAPPING
www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

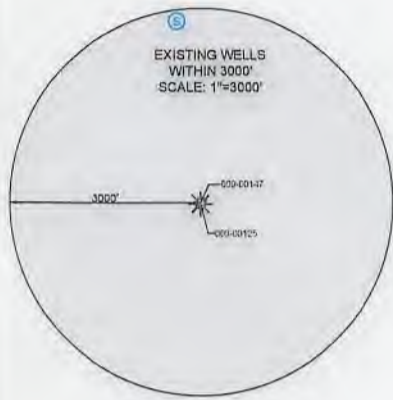
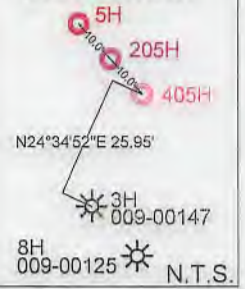
GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



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



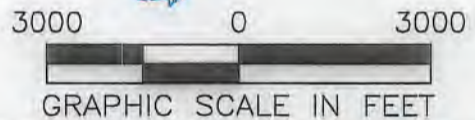
LINE	BEARING	DISTANCE
L1	N 29°52'57" W	1559.17'
L2	N 16°35'34" E	1419.68'

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4463504.10
EASTING: 539498.53

LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4463708.78
EASTING: 540130.25

TURNING POINT LOCATION (TPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4465443.44
EASTING: 539225.90

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4467242.80
EASTING: 538506.36



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

(+) 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)

STATE OF WV DNR A
OPERATOR'S WELL #: BRK 405H

API WELL #: 47 009 00300
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO NORTH ELEVATION: 1,139.8'

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

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±97.50

OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±97.50

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,716' TVD 19,438' 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

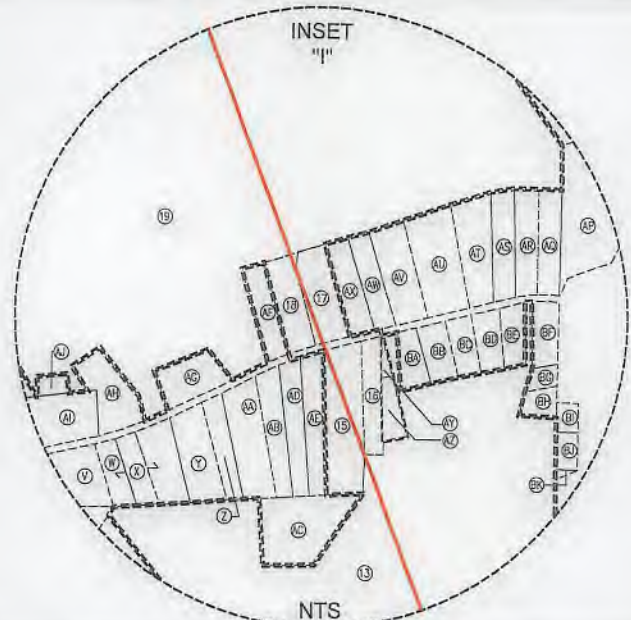
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:
PROPOSED SURFACE HOLE / BOTTOM HOLE
EXISTING / PRODUCING WELLHEAD
LPL: LANDING POINT LOCATION
TPL: TURNING POINT LOCATION

EXISTING WATER WELL
EXISTING SPRING
SURVEYED BOUNDARY
DRILLING UNIT
LEASE BOUNDARY
PROPOSED PATH

REVISIONS:
DATE: 10-22-2019

DRAWN BY: R. GRIMES
SCALE: 1" = 3000'
DRAWING NO: 2018-245
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-CC16-0007.0001
TRACT	SURFACE OWNER	TAX PARCEL
2	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-CC16-0008.0001
3	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-CC16-0023.0001
4	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-CC16-0011.0000
5	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-CC16-0010.0000
6	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-CC16-0012.0000
7	RONALD ALLEN REED	04-CC16-0004.0000
8	LAWRENCE & JILL MAZZELLA	04-CC16-0025.0000
9	PAUL MAROSI	04-CC16-0001.0000
10	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0054.0001
11	TAWNIA R. DENNIS	04-CC12-0062.0000
12	SHAWN A. DENNIS	04-C12J-0033.0000
13	PETREL IRREVOCABLE TRUST (NANCY PETREL, TRUSTEE)	04-C11M-0034.0000
14	JAMES E. & NANCY RHODES (SURVIVOR)	04-C11M-0034.0001
15	OPEN DOOR BAPTIST CHURCH	04-C11M-0020.0000
16	DONOVAN L. FLUHARTY	04-C11M-0019.0000
17	LUKE A. MESTER	04-C11M-0008.0000
18	STEPHEN R. & TAMERA K. GRIMM	04-C11M-0007.0000
19	MARK C., JR. & MARY E. SECRIST (SURVIVOR)	04-C11M-0005.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AG	ROBERT W. CONN	04-C11M-0005.0001
AH	GERALD E. GOURLEY	04-C11M-0004.0000
AI	ST JOHN'S EPISCOPAL CHURCH	04-C11M-0003.0000
AJ	TRUSTEES OF OLDE ST JOHN'S EPISCOPAL CHURCH	04-C11M-0005.0003
AK	MARK, JR. & MARY SECRIST (SURVIVOR)	04-C11M-0001.0000
AL	LINDA BURDISS	04-CC11-0085.0000
AM	WYLIE MCBRIDE, JR. & SUSAN BETH MCBRIDE GRIFFITH	04-CC11-0083.0000
AN	THOMAS J. PATE & JOHN SZYMANEK	04-CC11-0078.0000
AO	PETREL IRREVOCABLE TRUST, DATED 7/25/2013	04-CC12-0005.0000
AP	BRAD A. & MELISSA JO EVANS (SURVIVOR) (L/E: JUDY KEISTER)	04-C12J-0004.0000
AQ	DANIEL PHILLIP KEISTER & DAVID LEE KEISTER	04-C12J-0003.0000
AR	ROBERT L. KERNS, JR. (L/E: PEGGY A. STILLWELL)	04-C12J-0002.0000
AS	KENNETH J., JR. & AMY M. MCCLAUGHLIN (SURVIVOR)	04-C12J-0001.0000
AT	GLENN, JR. & VALERIE C. CAIN (SURVIVOR)	04-C11M-0012.0000
AU	LARRY J. & TINA C. DINIACO GASTON (SURVIVOR)	04-C11M-0011.0000
AV	MICHAEL & EMILIA REALE	04-C11M-0005.0002
AW	MICHAEL N. & EMILIE REALE (TRUSTEES)	04-C11M-0010.0000
AX	LUKE A. MESTER	04-C11M-0009.0000
AY	DONOVAN LAWRENCE FLUHARTY	04-C11M-0017.0000
AZ	DONOVAN FLUHARTY	04-C11M-0018.0000
BA	COLLIERS METHODIST CHURCH	04-C11M-0016.0000
BB	STEVEN M. & TAMMY L. KOZORA (SURVIVOR)	04-C11M-0015.0000
BC	TIMOTHY & DIANE J. SWANGO	04-C11M-0014.0000
BD	ROBERT RICHARD LONG	04-C11M-0013.0000
BE	GREGORY FRESHWATER & GARY FRESHWATER	04-C12J-0058.0000
BF	JAMES M. KERNS	04-C12J-0057.0000
BG	NICHOLAS & DEBORAH L. CEBULA; DANIEL L. & JUDITH A. SMITH	04-C12J-0056.0000
BH	JOHN & CARRIE SNATCHKO (SURVIVOR)	04-C12J-0055.0000
BI	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0052.0000
BJ	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0053.0000
BK	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0054.0000
BL	JAMIE LYNN DEULEY & SHERYL KOSEVIC	04-C12J-0041.0000
BM	SHAWN A. DENNIS	04-C12J-0042.0000
BN	JAMIE DEULEY & SHERYL KOSEVIC	04-C12J-0036.0000
BO	MARK L. TRUX	04-C12J-0035.0000
BP	PROMISE OF VICTORY CHURCH OF GOD	04-C12J-0032.0000
BQ	DONALD D. FORESTER ETAL	04-C12J-0034.0000
BR	SUSAN PORCH LANTZ	04-C12J-0028.0000
BS	RITA K. THOMAS	04-CC12-0055.0000
BT	TIMOTHY S. & STACY HOOPER (SURVIVOR)	04-CC12-0054.0000
BU	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0053.0000
BV	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0052.0000
BW	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0048.0000
BX	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0047.0000
BY	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0046.0000
BZ	DIANA L. LONGWELL	04-CC12-0045.0000
CA	BARBARA J. JOHNSTON	04-CC12-0044.0000
CB	BRIAN B. & STEPHANIE J. BUBECK (SURVIVOR)	04-CC12-0043.0000
CC	NATHANIEL J. & AMY L. KUZMA (JTWS)	04-CC16-0026.0001
CD	ARRISSA M. SUTER & KENNETH A. COCHRIN (SURVIVOR)	04-CC16-0027.0000
CE	NEIL E., JR. & MICHELLE L. VANCAMP (SURVIVOR)	04-CC16-0028.0000
CF	WILLIAM RICHARD WILLS	04-CC16-0033.0000
CG	JASON P. NUZUM	04-CC16-0031.0000
CH	TIMOTHY S. & STACY HOOPER (SURVIVOR)	04-CC12-0054.0000
CI	DENNIS MOLNAR, SR. & DENNIS MOLNAR, JR.	04-CC16-0013.0000
CJ	DONNA K. ROSS (J) & WILLIAM J. PAULES (J)	04-CC16-0014.0000
CK	TIMOTHY BRIAN CUNNINGHAM	04-CC16-0015.0000
CL	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0019.0000
CM	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0021.0000
CN	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0022.0000
CO	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0023.0000
CP	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0008.0000
CQ	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0046.0000
CR	RICHARD B. GASVODA	04-CC16-0001.0004
CS	RICHARD B. GASVODA	04-CC16-0001.0001
CT	RALPH A. BRADY, II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0002.0000
CU	RALPH A. BRADY, II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0003.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0000
B	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0001
C	COLLIERS SPORTSMAN CLUB	04-CC20-0024.0000
D	COLLIERS SPORTSMAN CLUB	04-CC20-0045.0000
E	FREDA M. DUNN & SANDRA ROBERT (L/E: FREDA DUNN)	04-CC20-0001.0000
F	DAVID C. DAMI	04-CC20-0001.0001
G	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0006.0000
H	THE PALFALVY IRREVOCABLE TRUST (DENNIS PALFALVY, III)	04-CC16-0005.0000
I	TERRY A. DAMI & ET AL (L/E: JOSEPH T. & LOIS C. DAMI)	04-CC16-0009.0000
J	REED GERHRLING FAMILY TRUST, DATED 10/17/2008	04-CC16-0032.0000
K	LAURA J. & STUART STEUDEBAKER	04-C15D-0030.0000
L	DAVID L. & CHERYL D. IVILL	04-C11S-0058.0000
M	RONALD C. BOTTORF, II	04-C11S-0092.0000
N	RONALD C. BOTTORF, II	04-C11S-0091.0000
O	PETER M. & LYNN A. MARTIN (SURVIVOR)	04-C11S-0093.0000
P	DAVID P. MELLISH	04-C11S-0089.0000
Q	DWAYNE WADLEY & CATHLEEN L. DONNE (JTWS)	04-C11S-0096.0000
R	DAVID P. MELLISH	04-C11M-0035.0000
S	DAVID LANCASTER	04-C11M-0032.0000
T	LAWRENCE V. & LISA L. FERRONE (SURVIVOR)	04-C11M-0033.0000
U	PAUL MAROSI	04-C11M-0029.0000
V	PAUL MAROSI	04-C11M-0028.0000
W	BARBARA MCVICKER & MARIA FRANCIS	04-C11M-0027.0000
X	JEFFREY W. & MARIA L. FRANCIS (SURVIVOR)	04-C11M-0027.0001
Y	JAMES W. RAHR	04-C11M-0026.0000
Z	RUSSELL E. RECH, III	04-C11M-0025.0000
AA	MARY L. LEMASTERS	04-C11M-0024.0000
AB	ROBERT S. LATIMER	04-C11M-0023.0000
AC	OPEN DOOR BAPTIST CHURCH	04-C11M-0034.0002
AD	EDWARD & KATHY CRUNY (FNA: KATHY CANTOR) (SURVIVOR)	04-C11M-0022.0000
AE	EUGENE R. & PATRICIA L. VISCO	04-C11M-0021.0000
AF	STEPHEN R. & TAMERA K. GRIMM	04-C11M-0006.0000

4700900300

REVISIONS:	COMPANY:			DATE: 10-22-2019
	OPERATOR'S	STATE OF WV DNR A		DRAWN BY: R. GRIMES
	WELL #:	BRK 405H		SCALE: N/A
	DISTRICT:	COUNTY:	STATE:	DRAWING NO: 2018-245
	CROSS CREEK	BROOKE	WV	WELL LOCATION PLAT