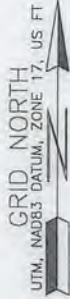




www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

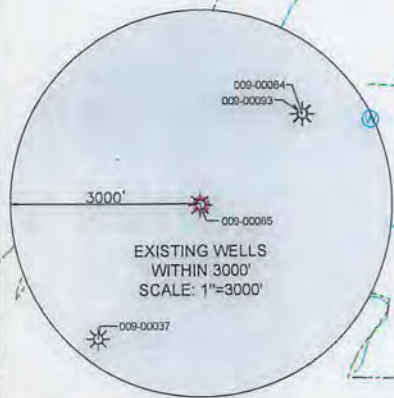
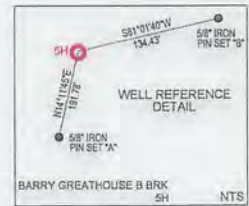


NOTES ON SURVEY

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.

01/04/2019

LINE	BEARING	DISTANCE
L1	S37°12'48"W	3059.53'
L2	S78°48'56"W	2249.38'



SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448656.47 EASTING: 530544.68
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448824.01 EASTING: 530578.50
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452132.62 EASTING: 528976.20



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	MINIMUM DEGREE OF ACCURACY: 1/200	BARRY GREATHOUSE B BRK		
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #:	47	009 00233

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"/>	ELEVATION: 1,142.9'
WATERSHED: UPPER OHIO SOUTH	QUADRANGLE: TILTONSVILLE, OH-WV
DISTRICT: BUFFALO COUNTY: BROOKE	ACREAGE: ±229.00
SURFACE OWNER: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE	ACREAGE: ±229.00
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"/>	ESTIMATED DEPTH: 5,811' TVD 18,225.6' TMD
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY)	
TARGET FORMATION: MARCELLUS	

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300	ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378	CITY: JANE LEW STATE: WV ZIP CODE: 26378



LEGEND:	REVISIONS:	DATE: 10-03-2018
<ul style="list-style-type: none"> PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD LPL* LANDING POINT LOCATION EXISTING WATER WELL EXISTING SPRING SURVEYED BOUNDARY DRILLING UNIT LEASE BOUNDARY PROPOSED PATH 		DRAWN BY: D. REED SCALE: 1" = 3000' DRAWING NO: 2017-547 WELL LOCATION PLAT

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	ROBERT J., JR. & LINDA MILLER	03-841-0047.0000
3	JOY ANN & EBBIE J. SCHUETZ	03-841-0046.0000
4	WINDSOR COAL COMPANY	03-841-0039.0000
5	WINDSOR COAL COMPANY	03-836-0091.0000
6	BUSINESS DEVELOPMENT CORPORATION OF THE NORTHERN PANHANDLE	01-8B36-0023.0001
7	BUSINESS DEVELOPMENT CORPORATION OF THE NORTHERN PANHANDLE	01-8B36-0001.0000
8	BUSINESS DEVELOPMENT CORPORATION OF THE NORTHERN PANHANDLE	01-8B36-0024.0000
9	BUSINESS DEVELOPMENT CORPORATION OF THE NORTHERN PANHANDLE	01-836K-0013.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	DANNY GENE & VIRGINIA MARGARET BRITT (SURVIVOR)	03-846-0027.0000
B	BOARD OF COMMISSION OHIO COUNTY, C/O WHG OHIO COUNTY AIRPORT AUTHORITY	04-0085-0010.0000
C	STACY ANN & PATRICIA ANN GREATHOUSE (SURVIVOR)	03-846-0041.0000
D	BARRY L. & PATRICIA A. GREATHOUSE	03-841-0032.0000
E	DANNY GENE & VIRGINIA MARGARET BRITT (SURVIVOR)	03-846-0027.0000
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	JAMES HANCHER	03-841-0044.0000
J	JOY ANN SCHUETZ	03-841-0043.0000
K	JOY ANN & EBBIE J. SCHUETZ (SURVIVOR)	03-841-0045.0000
L	SYLVESTER & MARY KELLER (SURVIVOR)	03-841-0038.0000
M	CHARLES BELL ESTATE	03-841-0031.0000
N	WINDSOR COAL COMPANY	03-841-0007.0000
O	WEST PENN POWER CO	01-8B36-0027.0000
P	WINDSOR COAL COMPANY	01-8B36-0026.0000
Q	WINDSOR COAL COMPANY	01-8B36-0025.0000
R	WINDSOR COAL COMPANY	01-8B36-0022.0000
S	MARY LOUISE MCALISTER	01-8B36-0021.0000
T	MARY LOUISE MCALISTER	01-8B36-0020.0000
U	LEITHA ADAMSON	01-8B36-0022.0000
V	RALPH & MARY ANN PLANTS	01-8B36-0004.0000
W	ALLEGHENY ENERGY SUPPLY COMPANY, LLC	01-8B36-0030.0000
X	BUSINESS DEVELOPMENT CORP OF THE NORTHERN PANHANDLE	01-8B36-0023.0000
Y	OHIO RIVER (STATE OF WEST VIRGINIA)	OHIO RIVER
Z	STATE ROUTE #2	RIGHT OF WAY
AA	DENNIS RUSCHEL	01-836K-0002.0000
AB	VILLAGE OF BEECH BOTTOM	01-836K-0003.0000
AC	DOLORES VIRGINIA COEN	01-836K-0012.0000
AD	VILLAGE OF BEECH BOTTOM	01-836K-0011.0000
AE	CURTIS D. & TINA L. OSSMAN (SURVIVOR)	01-836K-0010.0000
AF	LINDA COX (L. CONTRACT); WILLIAM HAROLD JONES	01-836K-0009.0000
AG	LINDA ANN COX (L. CONTRACT); WILLIAM HAROLD JONES	01-836K-0008.0000
AH	NICHOLAS RYNIWEC	01-836F-0096.0000
AI	GARY EDWARD & CONSTANCE L. COOPER	01-836F-0095.0000
AJ	ESTATE OF CHRIS W. KERCHER	01-836F-0094.0000
AK	WILLIAM E. & DEBRA L. LEONARD (SURVIVOR)	01-836F-0093.0000
AL	TARA D. SUTER	01-836F-0092.0000
AM	TARA D. SUTER	01-836F-0091.0000
AN	JOHN ESKEY	01-836F-0090.0000
AO	AMY N. FREY	01-836F-0089.0000
AP	BRUCE & DEBBI SELMON (SURVIVOR)	01-836F-0088.0000
AQ	BRUCE & DEBBI SELMON (SURVIVOR)	01-836F-0085.0000
AR	TERRY LYNN LILLY	01-836F-0084.0000
AS	GEORGE W. & CHARLOTTE BARNHART (SURVIVOR)	01-836F-0081.0000
AT	GEORGE W. & CHARLOTTE BARNHART (SURVIVOR)	01-836F-0079.0000
AU	C & P TELEPHONE COMPANY OF WEST VIRGINIA	01-836F-0078.0000
AV	BUSINESS DEVELOPMENT CORP OF THE NORTHERN PANHANDLE	01-836F-0077.0000
AW	MARK T. SVETIC	01-836F-0025.0000
AX	JAC FRED WV, LLC, A NORTH CAROLINA LLC	01-836F-0026.0000
AY	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0076.0000
AZ	MICHAEL EDWARD & EMMA FEDCZAK	01-836F-0075.0000
BA	SHELBY L. CASTO	01-836F-0074.0000
BB	SHELBY L. CASTO	01-836F-0073.0000
BC	PHYLLIS MARKER	01-836F-0072.0000
BD	GLENN T. & CAROLYN MOORE	01-836F-0071.0000
BE	CAROLYN K. MOORE	01-836F-0070.0000
BF	JEFFREY & CHERYL WEEKLEY (JWS)	01-836F-0069.0000
BG	JEFFREY L. STOLLAR	01-836F-0068.0000
BH	JUNE E. MORRELL	01-836F-0067.0000
BI	JUNE E. MORRELL	01-836F-0066.0000
BJ	SHIRLEY M. RYNIWEC	01-836F-0065.0000
BK	ALLEN KEITH & CAROLE YAHRLING	01-836F-0064.0000
BL	JUNE E. MORRELL	01-836F-0063.0000
BM	EDWARD A. POLAND	01-836F-0062.0000
BN	LELAND J. & TRACY A. DICKINSON	01-836F-0061.0000
BO	THE VILLAGE OF BEECH BOTTOM	01-836F-0060.0000
BP	JOYCE L. PAINTER	01-836F-0059.0000
BQ	JANET L. RICHARDSON	01-836F-0058.0000
BR	JANET L. RICHARDSON	01-836F-0057.0000
BS	JANET L. RICHARDSON	01-836F-0056.0000
BT	JANET L. RICHARDSON	01-836F-0055.0000
BU	JANET L. RICHARDSON	01-836F-0054.0000
BV	MONONGAHELA POWER COMPANY	01-836F-0053.0000
BW	LARRY W. GRIMES	01-836F-0052.0000
BX	LARRY W. GRIMES	01-836F-0051.0000
BY	BOARD OF EDUCATION	01-836B-0106.0000
BZ	CLINTON W. & LORRAINE DEWITT	01-836B-0061.0000
CA	VILLAGE OF BEECH BOTTOM	01-836B-0017.0000
CB	VILLAGE OF BEECH BOTTOM	01-836B-0016.0000
CC	VILLAGE OF BEECH BOTTOM	XXXXX
CD	JUSTIN & AMANDA SMART (JWS)	01-836B-0013.0000
CE	JUSTIN & AMANDA SMART (JWS)	01-836B-0015.0000
CF	GEORGE M. & JUDY LEWIS (SURVIVOR)	01-836B-0012.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
CG	GEORGE M. & JUDY LEWIS (SURVIVOR)	01-836B-0014.0000
CH	BELINDA DAUGHERTY & ET AL (L/E: JUNE ANN DAUGHERTY)	01-836B-0011.0000
CJ	BARBARA MCCUTCHAN	01-836B-0010.0000
CJ	WILLIAM B., JR. & ELIZABETH N. CAIN	01-836B-0009.0000
CK	SHEILA ANN LAZEAR	01-836B-0008.0000
CL	SHEILA LAZEAR	01-836B-0007.0000
CM	JOHN C. & KELLY A. RICHIE	01-836B-0006.0000
CN	JOHN C. & KELLY A. RICHIE	01-836B-0005.0000
CO	PATRICK J. DALBO	01-836B-0002.0000
CP	VILLAGE OF BEECH BOTTOM	01-836B-0001.0000
CQ	BROWNLEE LAND VENTURES LP	01-836B-0115.0000
CR	JOYCE A. SMITH	01-836B-0004.0000
CS	JOSEPH H. HODGES	01-836B-0121.0000
CT	LARRY WILLIAM COUCH (L/E: JEAN COUCH)	01-836B-0124.0000
CU	EDWARD A. CONERY	01-836B-0125.0000
CV	LOUIS & ARLINE MILLER	03-836-0005.0000
CW	LOUIS & ARLINE MILLER	03-836-0006.0000
CX	ELVINA WELLS BUCY & ET AL	03-831-0074.0000
CY	BERNARD J. LOMBARD, III	03-831-0081.0000
CZ	STEPHEN A. FODOR & JUDY L. BROWNLEE	03-836-0176.0000
DA	JOHN R. HOFFMAN & ALICE J. BUCHANAN	03-836-0175.0000
DB	PAUL D. & KIMBERLY D. LEONARD (SURVIVOR)	03-836-0173.0000
DC	BRANNON P. & EMILY M. LEONARD (SURVIVOR)	03-836-0172.0000
DD	BRANNON P. & EMILY M. LEONARD (SURVIVOR)	03-8360171.0000
DE	HARLEY J. LEMASTERS	03-836-0170.0000
DF	HARLEY J. LEMASTERS	03-836G-0047.0000
DG	HARLEY LEMASTERS	03-836G-0046.0000
DH	HARLEY LEMASTERS	03-836G-0045.0000
DI	HARLEY LEMASTERS	03-836G-0044.0000
DJ	HARLEY LEMASTERS	03-836G-0043.0000
DK	HARLEY J. LEMASTERS	03-836G-0042.0000
DL	HARLEY J. LEMASTERS	03-836G-0041.0000
DM	LESTER & KATHERINE WALLACE (SURVIVOR)	03-836G-0001.0000
DN	TONYA S. LOWE	03-836L-0011.0000
DO	JEFFREY M. & KRISTINA L. BARR (SURVIVOR)	03-836L-0011.0001
DP	AMANDA HUFF	03-836L-0017.0000
DQ	CONNIE WAGNER	03-836L-0015.0000
DR	BRIAN D. & CASEY K. RICHARDSON	03-836L-0021.0001
DS	WINDSOR COAL COMPANY	03-836-0101.0000
DT	WINDSOR COAL COMPANY	03-836-0102.0000
DU	WINDSOR COAL COMPANY	03-836-0100.0000
DV	WINDSOR COAL COMPANY	03-841-0048.0000
DW	SCOTT A. & SANDRA J. SANDRETH (SURVIVOR)	03-841-0050.0000
DX	FRED W. YOUNG, JR.	03-841-0054.0001
DY	DOROTHY S. MOORE	03-841-0054.0000
DZ	KARL DOUGLAS STEPHENS	03-841-0054.0002
EA	WILLIAM & DAWNA MILLER (SURVIVOR)	03-841-0061.0000
EB	JAY GLEN COLLINS	03-841-0080.0000
EC	DALE T. & MARY R. WOOD	03-841-0084.0000
ED	MARISSA J. FORSHEY	01-836K-0032.0000
EE	MARISSA J. FORSHEY	01-836K-0033.0000
EF	DONALD E. & PATRICIA A. GILBERT	01-836K-0034.0000
EG	MARISSA J. & ROBERT B. FORSHEY (SURVIVOR)	01-836K-0036.0000
EH	DONALD & PATRICIA GILBERT (SURVIVOR)	01-836K-0035.0000
EI	LINDA DARLIN SPENCER	01-836K-0037.0000
EJ	JESSE MCKEE	01-836K-0038.0000
EK	ALICE M. TAYLOR	01-836K-0039.0000
EL	MORRIS W. BLEAU	01-836K-0040.0000
EM	PAUL A. & MARY R. NEGRI; ROGER S. NEGRI	01-836K-0041.0000
EN	DONALD & ROSEMARIE MEADOWS (SURVIVOR)	01-836K-0042.0000
EO	JOHN MILLER	01-836K-0043.0000
EP	ALYSSA NEGRI	01-836K-0044.0000
EQ	ALYSSA R. NEGRI	01-836K-0045.0000
ER	JOHN E. & VIOLET E. CORSO (SURVIVOR)	01-836K-0046.0000
ES	JOHN E. & VIOLET E. CORSO (SURVIVOR)	01-836K-0047.0000
ET	JOHN E. & VIOLET E. CORSO (SURVIVOR)	01-836K-0048.0000
EU	MARK JORDAN	01-836K-0049.0000
EV	MARK L. & SHARON KAY JORDAN	01-836K-0050.0000
EW	CHARLES G., JR. & CECELA MOORE (JWS)	01-836K-0051.0000
EX	JAMES D. MEADOWS	01-836K-0050.0002
EY	JAMES D. MEADOWS	01-836K-0050.0001
EZ	CHARLES G. & CHRISTINE L. HOOD	01-836K-0050.0003
FA	CHARLES G. & CHRISTINE L. HOOD	01-836K-0031.0000
FB	CHRISTOPHER DEAN	01-836K-0030.0000
FC	MORRIS BLEAU	01-836K-0029.0000
FD	STEPHEN A. POLLOCK, JUDITH HALL & ET AL	01-836K-0028.0000
FE	ROGER S. NEGRI	01-836K-0027.0000
FF	ROGER S. NEGRI	01-836K-0026.0000
FG	KENNETH IVERSON	01-836K-0023.0000
FH	PAUL A. NEGRI	01-836K-0025.0000
FI	ROGER S. NEGRI	01-836K-0024.0000
FJ	ROGER S. NEGRI	01-836K-0022.0000
FK	ROGER S. NEGRI	01-836K-0021.0000
FL	ROGER S. NEGRI	01-836K-0020.0000
FM	LEONARD D., SR. & LORIE K. VARNER	01-836K-0019.0000
FN	LEONARD & LORIE VARNER	01-836K-0018.0000
FO	TERRY L. STEWART	01-836K-0017.0000
FP	MICHAEL OWEN MATHES	01-836K-0016.0000
FQ	WANDA S. JONES	01-836K-0015.0000
FR	WANDA S. JONES	01-836K-0014.0000
FS	LELAND J. & TRACY A. DICKINSON (SURVIVOR)	01-8B36-0006.0000
FT	DANIEL L. & CATHY J. JOHNSTON (SURVIVOR)	01-8B36-0007.0000
FU	STEVEN ANDREW & DEBBIE LYNN MURDOCK (SURVIVOR)	01-8B36-0008.0000
FV	CHERYL E. SMITH, LINDA CURIA (L/E: ROBERT & JOANN SMITH)	01-8B36-0009.0000
FW	FRANKLIN & CONNIE J. MILLER (SURVIVOR)	01-8B36-0010.0000
FX	FRANKLIN & CONNIE J. MILLER (SURVIVOR)	01-8B36-0011.0000
FY	FRANKLIN MILLER	01-8B36-0012.0000
FZ	FRANKLIN MILLER	01-8B36-0013.0000
GA	FRANKLIN MILLER	01-8B36-0014.0000
GB	FRANKLIN MILLER	01-8B36-0015.0000
GC	PAUL & MARY G. CUNNINGHAM (SURVIVOR)	01-8B36-0016.0000
GD	PAUL & GENEVIEVE CUNNINGHAM	01-8B36-0017.0000

01/04/2019

REVISIONS:	COMPANY:	 	
	OPERATOR'S	BARRY GREATHOUSE B BRK	
	WELL #:	5H	
	DISTRICT:	COUNTY:	STATE:
	BUFFALO	BROOKE	WV
			DATE: 10-03-2018
			DRAWN BY: D. REED
			SCALE: N/A
			DRAWING NO: 2017-547
			WELL LOCATION PLAT