

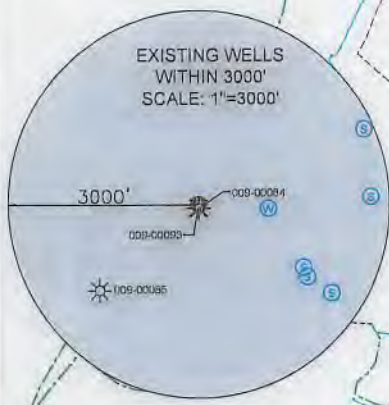
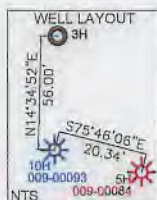
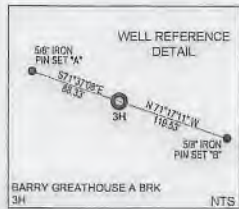


www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

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 PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 525 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.

02/15/2019



PROPOSED BOTTOM HOLE

STATE OF OHIO
STATE OF WEST VIRGINIA
OHIO RIVER

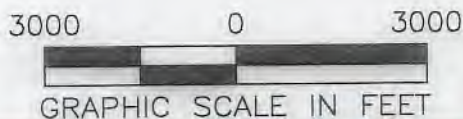
BHL

PROPOSED SURFACE HOLE

LINE	BEARING	DISTANCE
L1	S14°50'40"W	1083.80'
L2	N33°38'50"W	1144.24'

BROOKE COUNTY, WV
OHIO COUNTY, WV

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 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



(+) 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 ELEVATION: GRADE GPS (NAVD 88, US FT)

BARRY GREATHOUSE A BRK
OPERATOR'S WELL #: 3H
API WELL #: 47 STATE 009 COUNTY 00272 PERMIT

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

WATERSHED: UPPER OHIO SOUTH
DISTRICT: BUFFALO COUNTY: BROOKE
SURFACE OWNER: BARRY L. GREATHOUSE & PATRICIA A. GREATHOUSE
OIL & GAS ROYALTY OWNER: RAYLE COAL COMPANY

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

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

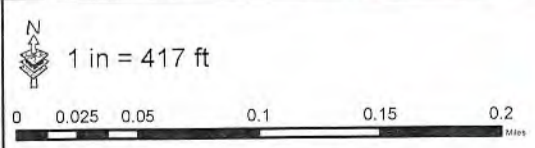
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,809' TVD 19,897.5' TMD

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: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION W EXISTING WATER WELL S EXISTING SPRING	REVISIONS:	DATE: 10-02-2018
○ SURVEYED BOUNDARY - DRILLING UNIT - LEASE BOUNDARY - PROPOSED PATH		DRAWN BY: D. REED SCALE: 1" = 3000' DRAWING NO: 2017-422 WELL LOCATION PLAN

(2,000' SCALE) LONGITUDE: -80°37'30" SURFACE HOLE
(2,000' SCALE) LONGITUDE: -80°37'30" BOTTOM HOLE

02/15/2019



- S Spring
- W Water Well
- Pond
- 1500' Buffer

Water Purveyor Map
Well Pad: Barry Greathouse A
County: BRK



Coordinate System: NAD 1983 UTM Zone 17N
 Units: Meter

Coordinates: 40.191574, -80.635584

Date: 7/3/2018 Author: willisb

Document Path: K:\EandP\WVD\Team Data\Regulatory\Bobby Willis\Maps\Water_Purveyor_BarryGreathouseA_Pad_1500Buffer.mxd

RECEIVED
 Office of Oil and Gas
 OCT 30 2018
 WV Department of
 Environmental Protection