

Top Hole Latitude: 40°17'30" 4,260'

Bottom Hole Latitude: 40°17'30" 7,411'

THRASHER

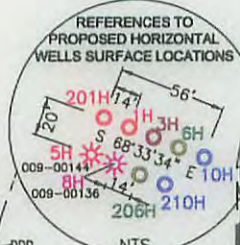
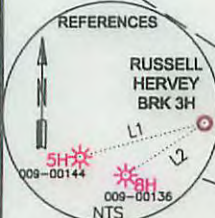
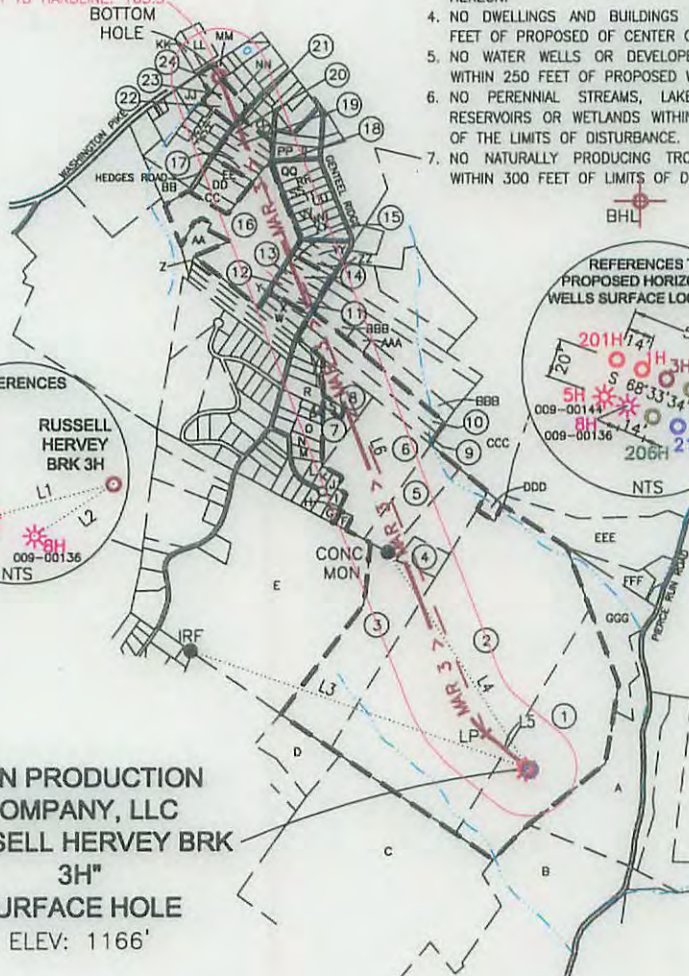
THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

NOTES ON SURVEY

- COORDINATES 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 FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- 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 LIMITS OF DISTURBANCE.

TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	(S)RUSSELL D. HERVEY (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0045-0000	37.84
2	(S)WILLIAM JUDSON HERVEY, II (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0045-0002	111.50
3	(S)FREDERICK L. HERVEY (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0045-0001	34.56
4	(S)CHARLIE D. FARRIS AND BRITNEY L. FARRIS (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0045-0004	3.26
5	(S)THOMAS MILLER (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0046-0000	9.13
6	(S)CHENETH BOHRT (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0036-0000	21.13
7	(S)SHERRY L. DENNIS (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0053-0000	2.51
8	(S)HAROLD E. MILLER (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0055-0000	2.00
9	(S)MARRY K. MILLER (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0039-0000	5.29
10	(S)MAMMA J. BENZO (R)CHESAPEAKE APPALACHA, LLC	05-03-B2B-0040-0000	5.98
11	(R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0023-0000	1.00
12	(S)JATHAN GAGICH (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0022-0000	1.00
13	(S)WILLIAM J. WELLS AND PATRICIA L. WELLS (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0021-0000	1.00
14	(S)PHILIP A. CONLEY, ET AL (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0020-0000	1.00
15	(S)DONALD SMITH DONALD L. SMITH AND CAROLYN J. SMITH (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0019-0000	1.00
16	(R)COREY P. ROMAN (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0014-0000	23.06
17	(R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0029-0000	1.11
18	(S)RONALD MISCH AND GLENNIS MISCH (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0030-0000	1.03
18	(S)KAREN S. KIRCHNER AND CHARLES D. KIRCHNER (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0031-0000	1.03
20	(S)COREY P. ROMAN AND DONNA M. ROMAN (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0032-0000	1.00
21	(S)ROBERT CLARK (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0033-0000	1.08
22	(S)JOHN P. HUNDAGEN AND TERRY HUNDAGEN (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0022-0000	1.11
23	(S)DIANA L. ALLMAN (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0021-0000	1.12
24	(S)JUDITH A. GRAY AND EDWING M. GRAY, SR. (R)JOANNE R. DUNKEL AND DONALD K. DUNKEL (R)WILLIAM S. BACH (R)MOLLIE ROBINSON	05-03-B2B-0011-0000	1.12

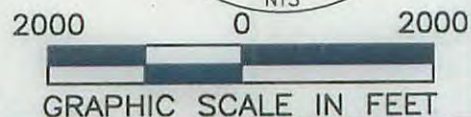
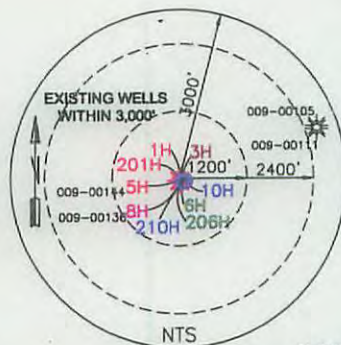
BH TO HARDLINE: 165.5'



SWN PRODUCTION COMPANY, LLC
"RUSSELL HERVEY BRK 3H"
SURFACE HOLE
 ELEV: 1166'

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,456,504.276 EASTING: 537,705.303
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,458,616.086 EASTING: 537,571.151
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,458,684.494 EASTING: 536,729.572

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	S 75°01'24" W	33.61'	SHL TO 5H	EXISTING WELL HEAD
L2	S 56°33'54" W	24.49'	SHL TO 6H	EXISTING WELL HEAD
L3	N 70°38'18" W	3690.15'	SHL TO LANDMARK	IRF FOUND
L4	N 32°53'21" W	2674.36'	SHL TO LANDMARK	CONCRETE MONUMENT
L5	N 50°11'25" W	572.96'	SHL TO LP	LANDING POINT
L6	N 22°08'24" W	7326.30'	LP TO BHL	BOTTOM HOLE



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. 2270

WAS *WV* 3/30/16

COMPANY: **SWN** Production Company, LLC

(+) 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)	COMPANY: SWN Production Company, LLC OPERATOR'S WELL #: 3H API WELL #: 47 STATE 009 COUNTY PERMIT
	WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input 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"/>	WATERSHED: BUFFALO CREEK DISTRICT: BUFFALO COUNTY: BROOKE SURFACE OWNER: RUSSELL D. HERVEY OIL & GAS ROYALTY OWNER: RUSSELL D. & LISA K. HERVEY

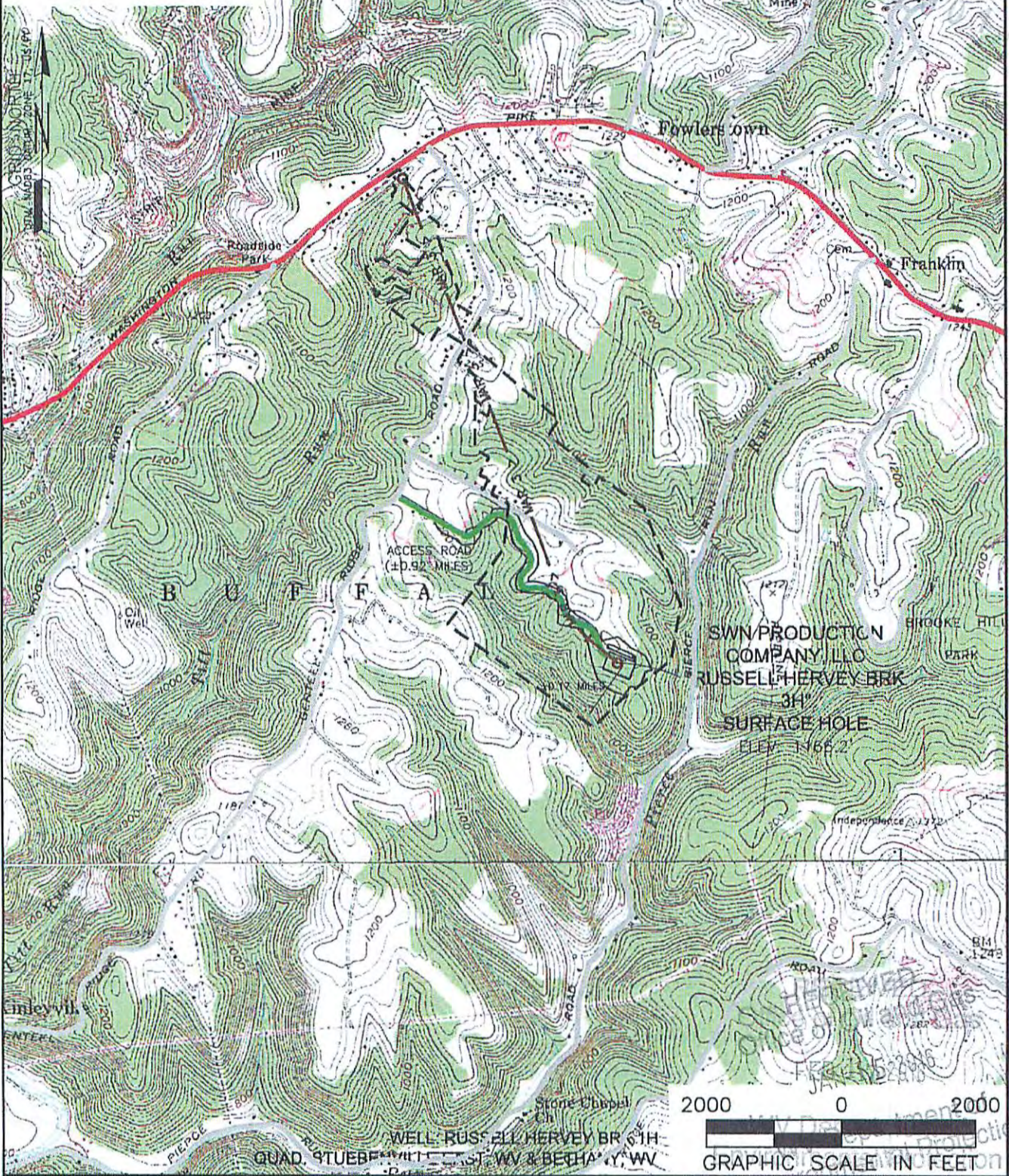
DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) _____
 TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,888 TMD 13,564 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL
 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 ○ ABANDONED WELL ○ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR	REVISIONS: --- LEASE BOUNDARY --- 500' DHP BUFFER --- MAR 3 --- MARCELLUS DHP --- ABANDONED PATH	DATE: 03-30-2016 DRAWN BY: E. LYTLE SCALE: 1" = 2000' DRAWING NO: 050-5495 WELL LOCATION PLAT
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THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108



NAME AND DISTANCE TO THE NEAREST STREAM: AN UN-NAMED TRIBUTARY TO PIERCE RUN IS LOCATED ±0.17 MILES SOUTHWEST OF THE CENTER OF THE DRILL PAD.		STREAM CROSSING COORDINATES (NAD 83): NO NEW CROSSINGS.		COMPANY: 	
WELL RESTRICTIONS: WELL PAD, LOD, & E & S CONTROL FEATURES TO PERENNIAL STREAM, LAKE, POND, RESERVOIR OR WETLAND: >100 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO NATURALLY PRODUCING TROUT STREAM: >300 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY: >1000 FEET WELL SHL TO EXISTING WATER WELL OR DEVELOPED SPRING: >250 FEET CENTER OF PAD TO OCCUPIED DWELLING STRUCTURE: >625 FEET CENTER OF PAD TO AGRICULTURAL BUILDINGS LAGER THAN 2500 SQ FT: >625 FEET		OPERATOR'S RUSSELL HERVEY BRK		WELL #: 3H	
FEMA FLOOD INFORMATION: NO FLOOD ZONES.		LOCATION: BUFFALO DISTRICT, BROOKE COUNTY, WEST VIRGINIA		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.258150° LONGITUDE: -80.556604°	
LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ● EXISTING / PRODUCING WELLHEAD ○ ABANDONED WELL ○ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR		● EXISTING SPRING ● EXISTING WATER WELL — ACCESS ROAD — ACCESS ROAD TO PREV. SITE — HIGHWAY/INTERSTATE — COUNTY ROAD		BOTTOM HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.277835° LONGITUDE: -80.567953°	
REVISIONS:		DATE: 12-14-2015		DRAWN BY: E. LYTLE SCALE: 1" = 2000' DRAWING NO.: 050-5495 TOPOGRAPHIC MAP	