

RETTEW

RETTEW Associates, Inc.
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SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,489.237 EASTING: 533,450.986
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,979.863 EASTING: 533,571.382
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,453,017.808 EASTING: 532,721.604

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

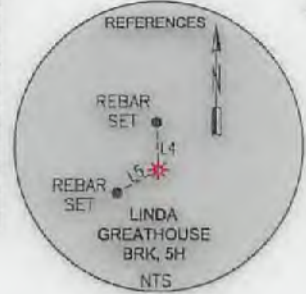
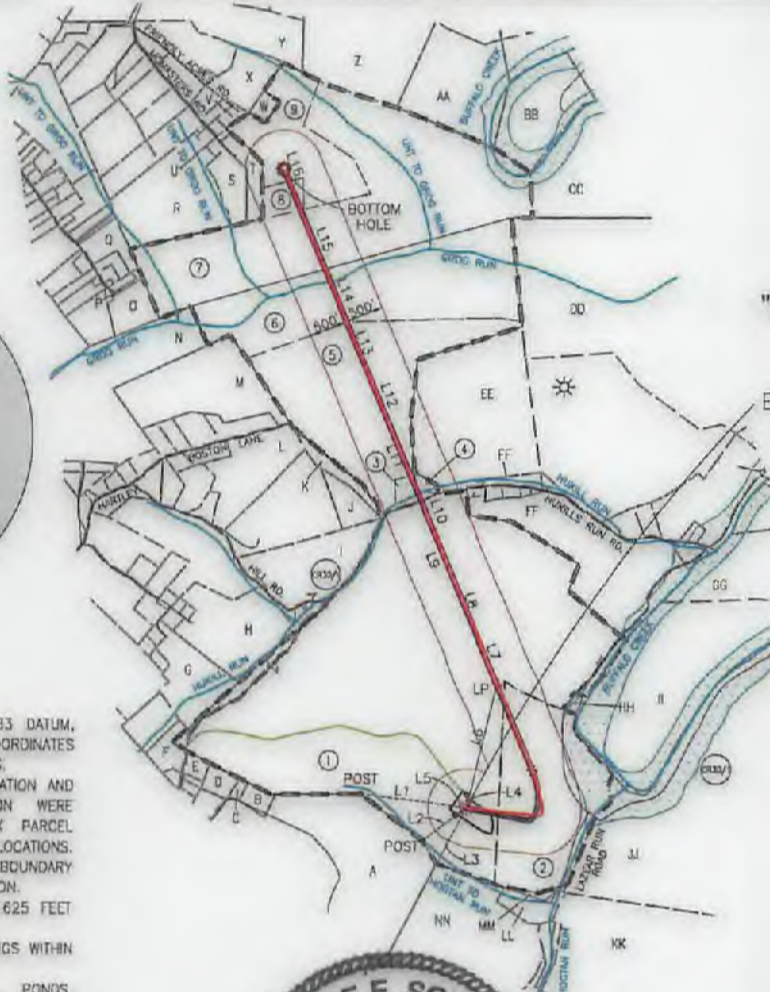
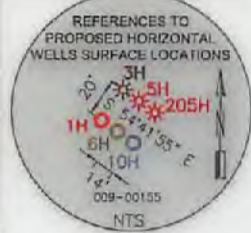
AS-DRILLED

SHL

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 82°46'47" W	1393.34'	SHL TO LANDMARK	FENCE POST
L2	S 52°53'47" W	713.52'	SHL TO LANDMARK	FENCE POST
L3	S 28°02'12" W	823.49'	SHL TO LANDMARK	FOUND STONE
L4	N 00°53'28" E	168.72'	SHL TO REF. PNT.	1/2" REBAR SET
L5	S 57°34'04" W	177.26'	SHL TO REF. PNT.	1/2" REBAR SET
L6	N 13°47'15" E	1657.42'	SHL TO LP	
L7	N 22°00'54" W	739.98'	AS-DRILLED BORE	
L8	N 23°35'28" W	741.92'	AS-DRILLED BORE	
L9	N 22°21'39" W	648.51'	AS-DRILLED BORE	
L10	N 22°54'47" W	741.27'	AS-DRILLED BORE	
L11	N 22°59'59" W	742.93'	AS-DRILLED BORE	
L12	N 22°10'48" W	741.85'	AS-DRILLED BORE	
L13	N 22°58'11" W	741.76'	AS-DRILLED BORE	
L14	N 22°40'55" W	741.69'	AS-DRILLED BORE	
L15	N 22°36'49" W	649.81'	AS-DRILLED BORE	
L16	N 21°59'51" W	754.69'	AS-DRILLED BORE	

Latitude: 40°12'30"

Longitude: 80°35'00"

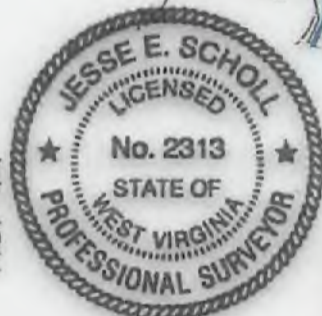


SWN PRODUCTION COMPANY, LLC
"LINDA GREATHOUSE BRK, 5H"
SURFACE HOLE
ELEV: 1139.20' (AS-DRILLED)

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 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.

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.



PROPERTY OWNER INFORMATION
(SEE PROPERTY OWNER SHEET)

2500 0 2500

GRAPHIC SCALE IN FEET

COMPANY: **SWN** Production Company, LLC

P.S. 2313

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>LINDA GREATHOUSE BRK</p> <p>OPERATOR'S WELL #: 5H</p> <p>API WELL #: 47 09 00155</p> <p>STATE COUNTY PERMIT</p>
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WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH ELEVATION: ±1139.20 (AS-DRILLED)

DISTRICT: BUFFALO COUNTY: BROOKE QUADRANGLE: BETHANY, WV

SURFACE OWNER: LINDA REEVES GREATHOUSE ACREAGE: ±323.19

OIL & GAS ROYALTY OWNER: LINDA REEVES GREATHOUSE ACREAGE: ±760.80

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 **09/15/2017**

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,879' TVD 14,792' TMD

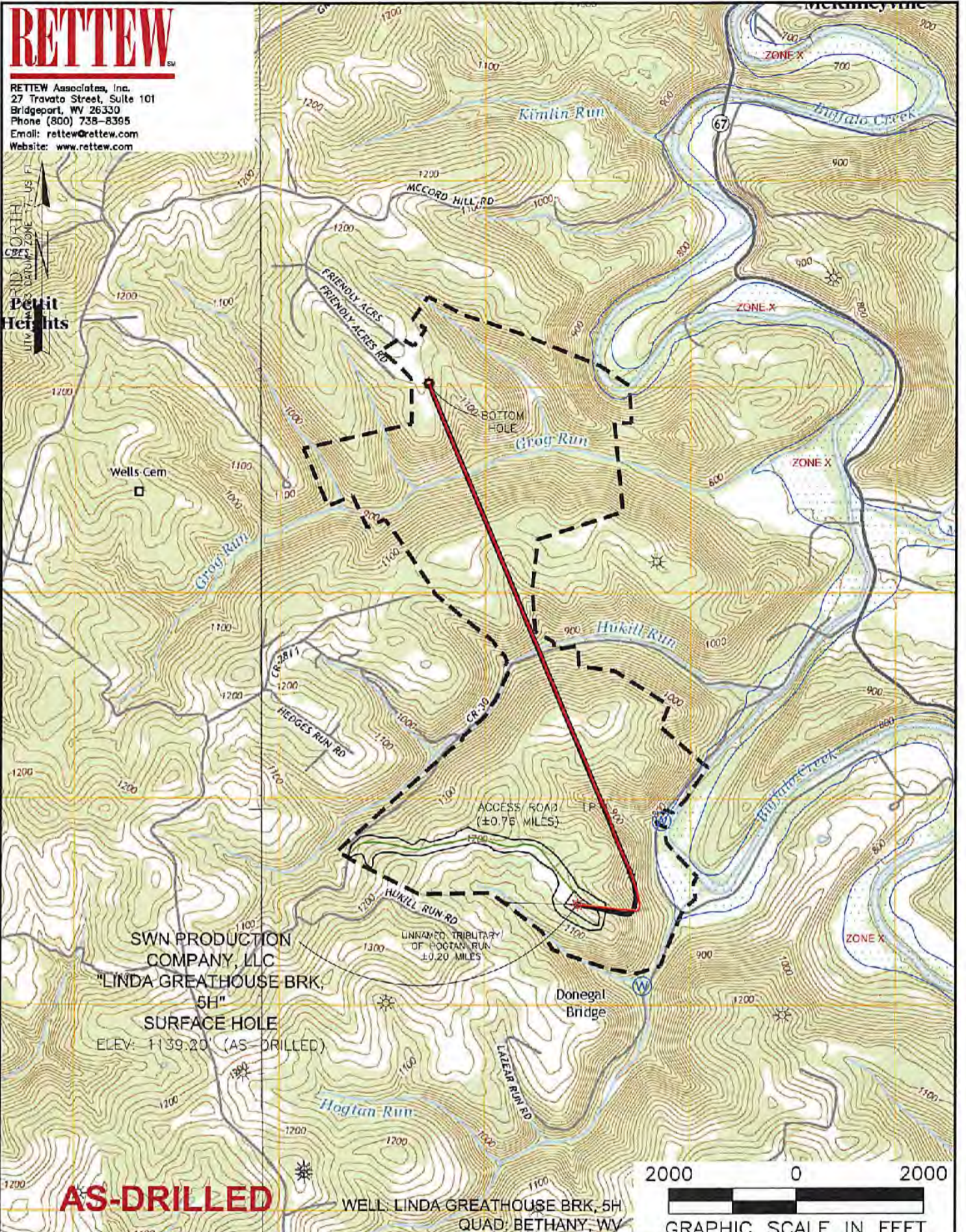
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: DEE SOUTHALL
ADDRESS: P.O. BOX 1300	ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378	CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND:	TIE LINE	REVISIONS:	DATE: 12-16-2015
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	--- LEASE BOUNDARY		
⊙ EXISTING / PRODUCING WELLHEAD	--- 500' DHP BUFFER		
⊗ ABANDONED WELL	--- PROPOSED DHP		
⊗ PLUGGED & ABANDONED WELL	--- AS-DRILLED DHP		
△ CUT CONDUCTOR	--- ABANDONED PATH		
			DRAWN BY: B. HERMAN
			SCALE: 1" = 2500'
			DRAWING NO: 087569015
			WELL LOCATION PLAT

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PERMIT HEIGHTS
LIVABLE DRAINAGE ZONE 17- US F



AS-DRILLED

WELL: LINDA GREATHOUSE BRK, 5H
QUAD: BETHANY, WV



NAME AND DISTANCE TO THE NEAREST STREAM: HOGTAN RUN IS LOCATED ±0.30 MILES SOUTHEAST 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 LARGER THAN 2500 SQ FT: >625 FEET		OPERATOR'S: LINDA GREATHOUSE BRK WELL #: 5H			
FEMA FLOOD INFORMATION: BY GRAPHIC PLOTTING ONLY FEMA FIRM INCORPORATED AREA OF BROOKE COUNTY, WEST VIRGINIA; MAP NUMBER 54009C0130D; EFFECTIVE DATE: APRIL 19, 2010. FLOOD ZONE X IS SITUATED WITHIN THE LEASE BOUNDARY.		LOCATION: BUFFALO DISTRICT, BROOKE COUNTY, WEST VIRGINIA		SURFACE HOLE LOCATION: 09/15/2017	
LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD ✕ ABANDONED WELL ✕ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR		(S) EXISTING SPRING (W) EXISTING WATER WELL — ACCESS ROAD — ACCESS ROAD TO PREV. SITE — HIGHWAY/INTERSTATE — COUNTY ROAD		REVISIONS: DATE: 12-16-2015 DRAWN BY: B. HERMAN SCALE: 1" = 2000' DRAWING NO: 087569015 TOPOGRAPHIC MAP	