



RETTEW Associates, Inc.
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 Pittsburgh, PA 15205
 Phone (412) 446-1728 · Fax (412) 446-1733
 Engineers · Planners · Surveyors · Landscape Architects
 Environmental Consultants

NOTES ON SURVEY

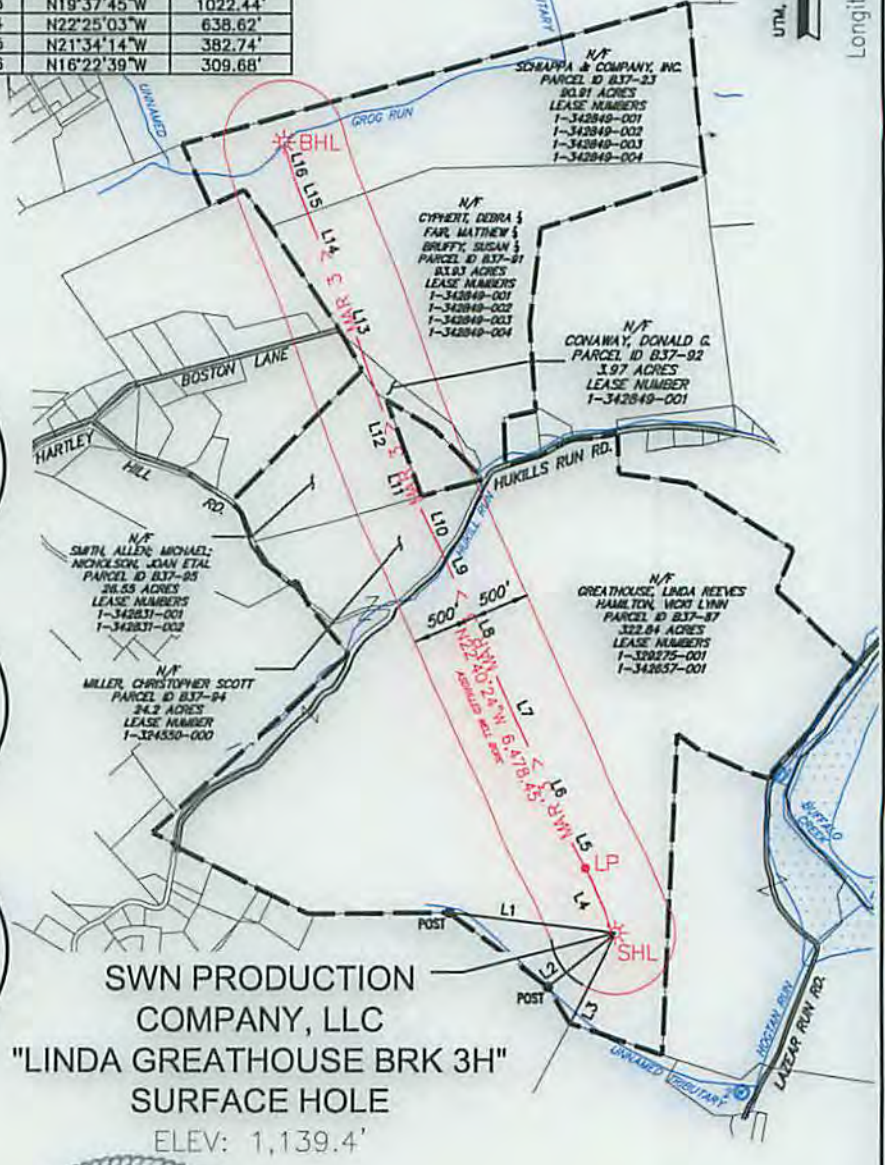
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
- THIS PLAT DOES NOT 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 1000 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- THE HORIZONTAL LATERAL SHOWN HERE ON IS BASED ON AS-DRILLED DIRECTIONAL REPORT PROVIDED BY OTHERS.

LINE	DESCRIPTION	DISTANCE	DESCRIPTION	MONUMENT
L1	N83°05'08"W	1381'	SHL TO LANDMARK	POST
L2	S51°45'52"W	710'	SHL TO LANDMARK	POST
L3	S27°02'34"W	826'	SHL TO LANDMARK	STONE
L4	N25°09'17"W	591.65'	SHL TO LP	
L5	N27°50'44"W	340.80'		
L6	N23°36'20"W	766.57'		
L7	N24°59'38"W	767.52'		
L8	N23°53'22"W	637.63'		
L9	N23°40'48"W	383.78'		
L10	N25°47'06"W	340.78'		
L11	N23°03'46"W	255.73'		
L12	N21°12'35"W	638.57'		
L13	N19°37'45"W	1022.44'		
L14	N22°25'03"W	638.62'		
L15	N21°34'14"W	382.74'		
L16	N16°22'39"W	309.68'		

Latitude: 40°12'30"(NAD27)

GRID NORTH
 UTM, NAD83 DATUM, ZONE 17, US FT
 Longitude: 80°35'00"(NAD27)

SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.204165° LONGITUDE: -80.606986°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,601,322.321' EASTING: 1,750,152.274'
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,491.944 EASTING: 533,447.480
"LANDING POINT" LOCATION (LPL):
GEOGRAPHIC (NAD83): LATITUDE: 40.205638° LONGITUDE: -80.607878°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,601,857.859' EASTING: 1,749,900.785'
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,655.177 EASTING: 533,370.826
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.222083° LONGITUDE: -80.616730°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,607,835.642' EASTING: 1,747,403.502'
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,477.209 EASTING: 532,609.653



SWN PRODUCTION COMPANY, LLC
"LINDA GREATHOUSE BRK 3H"
 SURFACE HOLE
 ELEV: 1,139.4'

ASDRILLED

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. *[Signature]*

(+) 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

LINDA GREATHOUSE BRK

OPERATOR'S WELL #: 3H

API WELL #: 47 09 00097

STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1138'

DISTRICT: BUFFALO COUNTY: BROOKE, WV QUADRANGLE: BETHANY, WV.

SURFACE OWNER: LINDA REEVES GREATHOUSE ACREAGE: 322.84±

OIL & GAS ROYALTY OWNER: LINDA REEVES GREATHOUSE ACREAGE: 760.602±

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

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,820 TO 12,733 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
- LEASE BOUNDARY
- 500' DHP BUFFER
- - - MAR 3 - - - MARCELLUS DHP
- ABANDONED PATH

REVISIONS:

DATE: 07-13-2015

DRAWN BY: M. BOSSOM

SCALE: 1" = 1600'

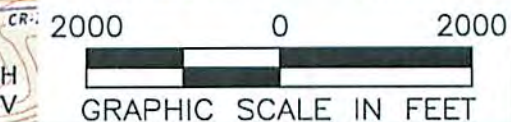
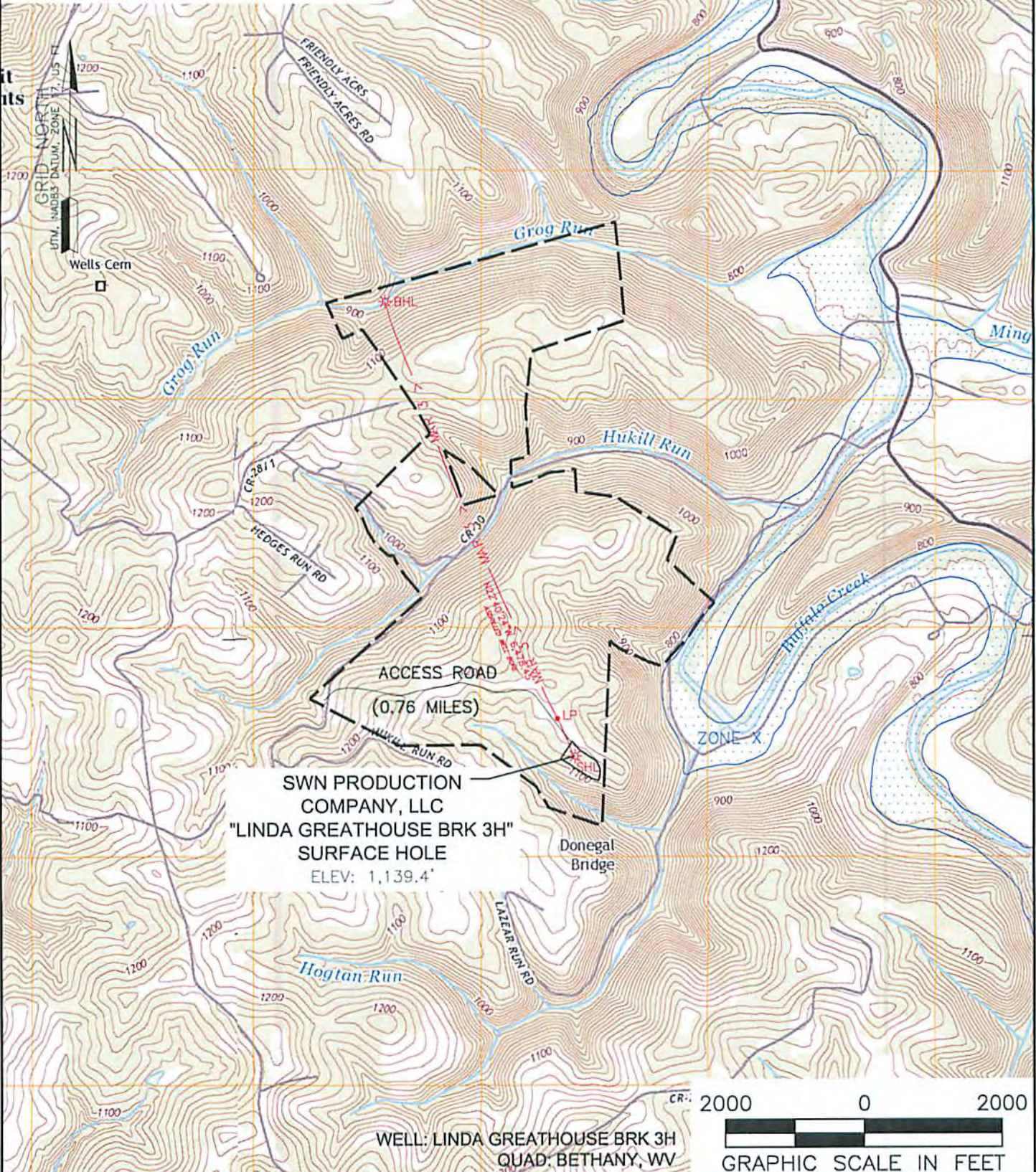
DRAWING NO: 087569015

WELL LOCATION PLAT 3



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ASDRILLED
 07-14-2015



NAME AND DISTANCE TO THE NEAREST STREAM: HOGTAN RUN IS LOCATED ±0.30 MILES SE 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 #: 3H	
FEMA FLOOD INFORMATION: BY GRAPHIC PLOTTING ONLY FEMA FIRM INCORPORATED AREA OF BROOKE COUNTY, WEST VIRGINIA; MAP NUMBER 54009C0130D; EFFECTIVE DATE: 04-19-2010.		LOCATION: BUFFALO DISTRICT, BROOKE COUNTY, WEST VIRGINIA		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.204165° LONGITUDE: -80.606986°	
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		BOTTOM HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.222083° LONGITUDE: -80.616730°		REVISIONS: DATE: 07-13-2015 DRAWN BY: M. BOSSOM SCALE: 1" = 2000' DRAWING NO: 087569015 TOPOGRAPHIC MAP 3	