



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

January 21, 2016

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359
SPRING, TX 773914954

Re: Permit Modification Approval for API Number 5101843, Well #: B & W EDGE MSH
205H

Modified lateral bore path

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Gene Smith".

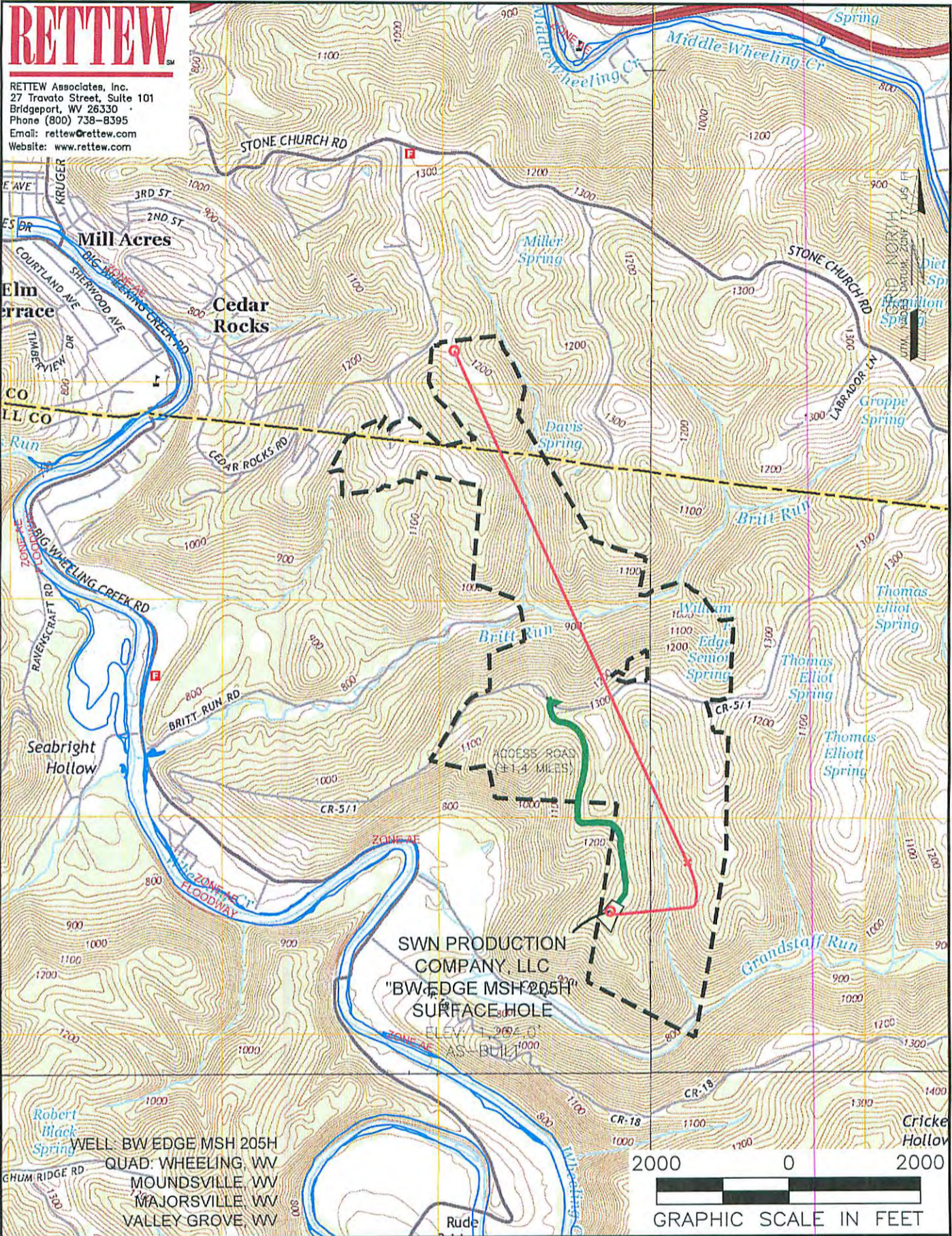
for Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

Promoting a healthy environment.

01/22/2016

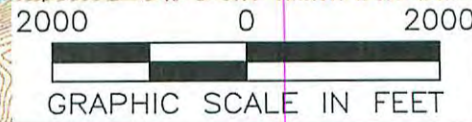


RETTEW Associates, Inc.
27 Travato Street, Suite 101
Bridgeport, WV 26330
Phone (800) 738-8395
Email: rettetw@rettetw.com
Website: www.rettetw.com



SWN PRODUCTION COMPANY, LLC
"BW EDGE MSH 205H"
SURFACE HOLE
ELEV. 2094.0'
AS-BUILT

WELL: BW EDGE MSH 205H
QUAD: WHEELING, WV
MOUNDSVILLE, WV
MAJORSVILLE, WV
VALLEY GROVE, WV

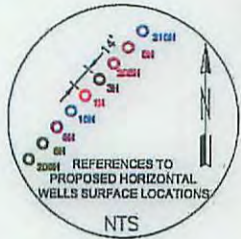


NAME AND DISTANCE TO THE NEAREST STREAM: UNNAMED TRIBUTARY TO GRANDSTAFF RUN IS LOCATED ±0.17 MILES SE. OF THE CENTER OF THE DRILL PAD.		STREAM CROSSING COORDINATES (NAD 83): NO NEW CROSSINGS.		COMPANY: 	
WELL RESTRICTIONS: WELL PAD, LOD, & E & S CONTROL FEATURES TO PERENNIAL STREAM, LAKE, POND, RESERVOIR 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 BW EDGE MSH		WELL #: 205H	
FEMA FLOOD INFORMATION: BY GRAPHIC PLOTTING ONLY FEMA FIRM UNINCORPORATED AREA OF MARSHALL COUNTY, WEST VIRGINIA; MAP NUMBER 54051C0019E, EFFECTIVE DATE SEPTEMBER 25, 2009.		LOCATION: SAND HILL DISTRICT, MARSHALL COUNTY, WEST VIRGINIA		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.006578° LONGITUDE: -80.627477°	
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: 40.029894° LONGITUDE: -80.635887°	
REVISIONS:		DATE: 01-11-2016		DRAWN BY: J. AIKEN SCALE: 1" = 2000' DRAWING NO: 087569005 TOPOGRAPHIC MAP	

Received
Office of Oil & Gas
01/22/2016
JAN 13 2016

RETTEW

RETTEW Associates, Inc.
27 Travato Street, Suite 101
Bridgeport, WV 26330
Phone (800) 738-8365
Email: rette@rette.com
Website: www.rette.com



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

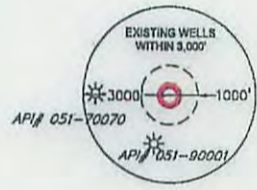
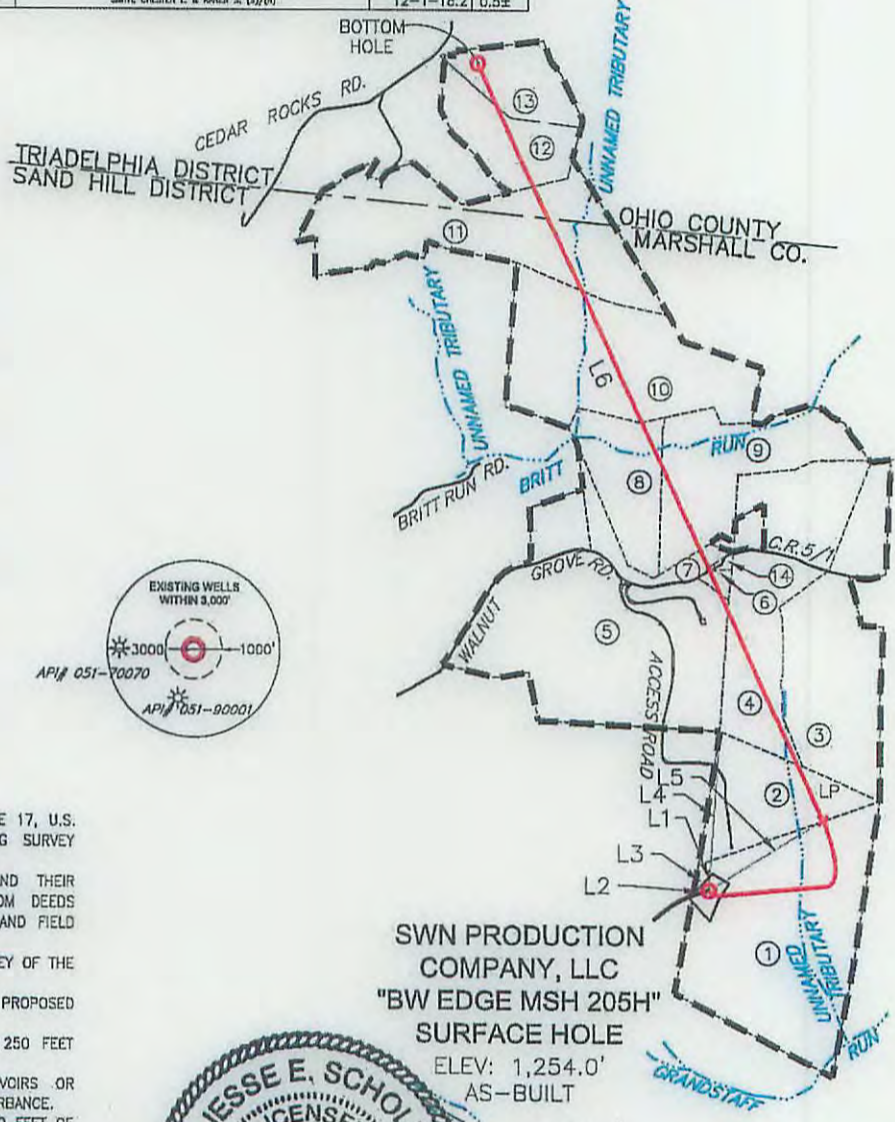
LINE	DESCRIPTION	DISTANCE	DESCRIPTION	MONUMENT
L1	N00°41'32"E	195'	SHL TO REF. PIN	IRON PIN
L2	S81°57'39"W	207'	SHL TO REF. PIN	IRON PIN
L3	N43°24'09"W	193'	SHL TO LANDMARK	POST
L4	N03°41'47"E	1,639'	SHL TO LANDMARK	REBAR
L5	N42°32'13"E	1,486'	SHL TO LP	
L6	N24°41'10"W	8,129'	LP TO BHL	

TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	EDGE, WILLIAM F. JR. & BARBARA (S)/FLETCHER, JOSEPHINE (R)	12-9-B	67.8±
2	EDGE, WILLIAM F. JR. & BARBARA (S)/FLETCHER, JOSEPHINE (R)	12-9-B.1	28.0±
3	GIA, CHESTER A. (S)/R	12-1-16	53.1±
4	GIA, CHESTER A. (S)/R	12-1-15	53.4±
5	SCHILLHASE, MARK A. & ANFERA K. (S)/R	12-1-18	93.8±
6	SCHILLHASE, MARK A. & ANFERA K. (S)/R	12-1-18.5	0.9±
7	HILLER, VOLET B. (S)/R	12-1-18.3	8.0±
8	MARGARET, PETER E. & SUSAN K. (S)/R	12-1-12	25.4±
9	MCHUGH, KEVIN L. (S)/R	12-1-14	39.0±
9	HOLMES, CAROL ANN (S)/R	12-1-14	39.0±
10	COFFIELD, MICHAEL L. & TYLER R. (S)/R	12-1-13	71.6±
11	HARDMAN, WALTER LEWIS & GLORIA LOUISE (S)/R	12-1-10.1	47.8±
12	SEALL, GREGORY W. & JILL ANN (S)/R	T17-8.3	20.0±
13	SEALL, GREGORY W. & JILL ANN (S)/R	T17-9.1	17.6±
14	SMITH, CHESTER L. & WANDA S. (S)/R	12-1-18.2	0.5±

Latitude: N 40°02'30"

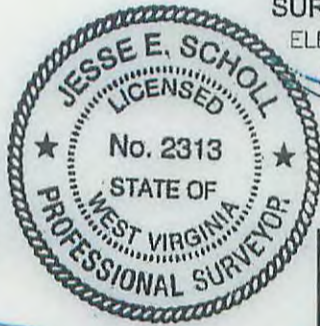
Longitude: W 80°37'30"

SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.006578° LONGITUDE: -80.627477°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,529,346.803° EASTING: 1,744,732.204°
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,553.763 EASTING: 531,795.439
"LANDING POINT" LOCATION (LPL):
GEOGRAPHIC (NAD83): LATITUDE: 40.008566° LONGITUDE: -80.623276°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,530,075.630° EASTING: 1,745,905.660°
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,428,775.910 EASTING: 532,153.109
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.029894° LONGITUDE: -80.635887°
UTM (NAD83, ZONE 17, FEET): NORTHING: 14,537,827.590° EASTING: 1,742,342.430°
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,431,138.712 EASTING: 531,067.035



- 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.



P.S. 2313

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	COMPANY: SWN Production Company, LLC
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF ELEVATION: GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: BW EDGE MSH 205H API WELL #: 47 051 01843H6A MOD
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"/>		WATERSHED: UPPER OHIO SOUTH DISTRICT: SAND HILL COUNTY: MARSHALL SURFACE OWNER: EDGE, WILLIAM F. JR. & BARBARA OIL & GAS ROYALTY OWNER: FLETCHER, JOSEPHINE	
DRILL <input checked="" type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input checked="" type="checkbox"/>		ELEVATION: 1,254.0' AS-BUILT QUADRANGLE: WHEELING, W.VA-OHIO ACREAGE: 87.8± ACREAGE: 115.8±	
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY) _____		TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,377' TD 15,328' TMD	
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378		DESIGNATED AGENT: DEE SOUTHALL ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378	

LEGEND:	REVISIONS:	DATE: 01-11-2016
○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD X ABANDONED WELL ⊕ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR	--- LEASE BOUNDARY --- MARCELLUS DHP --- ABANDONED PATH	DRAWN BY: J. AIKEN SCALE: 1" = 2000' DRAWING NO: 087569005 WELL LOCATION PLAT

SWN

Southwestern Energy®

PO Box 1300
Jane Lew, WV 26378
PHONE: (832) 796-1610

January 12, 2016

Ms. Laura Adkins
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Modifications for BW Edge MSH 5H & 205H API # 47-051-01845 & 47-051-01843

Dear Ms. Adkins


Enclosed please find revised plats for the above mentioned wells. The casing plan will stay the same however the wellbore path has slightly moved. We will also not cover any additional leases.

This well is situated on the BW Edge property, in Sand Hill District, Marshall County, West Virginia.

If you have any questions or desire additional information, please me at 304-884-1614.

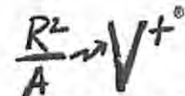
Thank you.

Sincerely,



Dee Southall
Regulatory Supervisor
Southwestern Energy Production Company, LLC
PO Box 1300
Jane Lew, WV 26378

Received
Office of Oil & Gas
JAN 13 2016



The Right People doing the Right Things,

01/22/2016