

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47-009-00175 County BROOKE District BUFFALO
Quad BETHANY, WV-PA Pad Name JAMES SEABRIGHT-BRK-KPAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name JAMES K. & MARTHA MAY SEABRIGHT; LIFE ESTATE & JAMES H. SEABRIGHT Well Number JAMES SEABRIGHT BRK 10H
Operator (as registered with the OOG) SWN PRODUCTION COMPANY, LLC
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,452,333.866 Easting 539,870.249
Landing Point of Curve Northing 4,452,303.060 Easting 540,012.494
Bottom Hole Northing 4,450,282.695 Easting 540,869.671

Elevation (ft) 1130.5' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
SOBM

Date permit issued 02/25/2016 Date drilling commenced 03/17/2017 Date drilling ceased 07/04/2017
Date completion activities began 07/28/2017 Date completion activities ceased 09/01/2017
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 233' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 829' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 311' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed
[Signature] 2-7-18

Reviewed by:
[Signature] 2-7-18
03/02/2018

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API 47- 009 - 00175

Farm name JAMES K. & MARTHA MAY SEABRIGHT; LIFE ESTATE & JAMES H. SEABRIGHT

Well number JAMES SEABRIGHT BRK 10H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24	20	126	NEW	J-55/94#		Y
Surface	17.5	13.375	366	NEW	H-40/48#		Y; 16 BBLS RETURNED
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1,727	NEW	J-55/36#		Y; 30 BBLS RETURNED
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	13,672	NEW	HCP-110/20#		Y
Tubing		2.375	6,371	NEW	P-110/4.7#		N
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	350	15.60	1.20	420	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	670	15.60	1.18	790.60	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2,500	15.60	1.19	2,975	SURFACE	24
Tubing							

Drillers TD (ft) 13,672 Loggers TD (ft) 13,672
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) 5,374'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

SURFACE: 7 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 PRODUCTION: 181 CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENTS	1		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	ATTACHMENTS	2				

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Please insert additional pages as applicable.

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API 47- 009 - 00175 Farm name JAMES K. & MARTHA MAY SEABRIGHT, LIFE ESTATE & JAMES H. SEABRIGHT Well number JAMES SEABRIGHT BRK 10H

PRODUCING FORMATION(S)	DEPTHS	
<u>MARCELLUS</u>	<u>6,054'</u> TVD	<u>6,315'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 1471 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs
 OPEN FLOW Gas 2,627 mcfpd Oil 255 bpd NGL _____ bpd Water 0 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

Please insert additional pages as applicable.

Drilling Contractor SWN DRILLING COMPANY
 Address PO BOX 12359 City SPRING State TX Zip 77391-2359
 Logging Company BAKER HUGHES
 Address 9110 GROGAN MILL RD City THE WOODLANDS State TX Zip 77380
 Cementing Company B J SERVICES
 Address 11211 FM 2920 City TOMBALL State TX Zip 77377
 Stimulating Company US WELL SERVICES
 Address 770 S POST OAK LN #405 City HOUSTON State TX Zip 77056

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Please insert additional pages as applicable.

Completed by DENISE GRANTHAM Telephone 832-796-6139
 Signature *Denise Grantham* Title REGULATORY TECHNICIAN Date 11.9.17

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**JAMES SEABRIGHT BRK 10H
PERF SUMMARY**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	7/28/2017	13,434	13,541	33
2	7/29/2017	13,239	13,371	33
3	7/29/2017	13,044	13,176	33
4	7/29/2017	12,849	12,981	33
5	7/30/2017	12,654	12,783	33
6	7/30/2017	12,459	12,591	33
7	7/30/2017	12,264	12,396	33
8	7/31/2017	12,069	12,201	33
9	7/31/2017	11,874	12,006	33
10	7/31/2017	11,679	11,807	33
11	7/31/2017	11,484	11,616	33
12	8/1/2017	11,289	11,421	33
13	8/1/2017	11,094	11,226	33
14	8/1/2017	10,899	11,031	33
15	8/1/2017	10,704	10,836	33
16	8/1/2017	10,509	10,641	33
17	8/2/2017	10,314	10,446	33
18	8/2/2017	10,119	10,251	33
19	8/2/2017	9,924	10,056	33
20	8/5/2017	9,729	9,861	33
21	8/6/2017	9,534	9,666	33
22	8/6/2017	9,339	9,471	33
23	8/6/2017	9,144	9,276	33
24	8/6/2017	8,949	9,081	33
25	8/7/2017	8,754	8,886	33
26	8/7/2017	8,559	8,691	33
27	8/7/2017	8,367	8,496	33
28	8/8/2017	8,169	8,301	33
29	8/8/2017	7,974	8,106	33
30	8/8/2017	7,779	7,911	33
31	8/9/2017	7,588	7,716	33
32	8/9/2017	7,389	7,521	33
33	8/9/2017	7,194	7,326	33
34	8/9/2017	6,999	7,131	33
35	8/10/2017	6,804	6,933	33
36	8/10/2017	6,609	6,741	33
37	8/10/2017	6,414	6,546	33

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JAMES SEABRIGHT BRK 10H
FRAC STAGE SUMMARY

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/other
1	7/28/2017	80	7,259	7,732	4,510	375,900	6,659	
2	7/29/2017	80	7,389	8,254	4,438	375,240	5,763	
3	7/29/2017	79	7,116	8,612	4,656	375,660	5,831	
4	7/29/2017	79	7,311	8,816	4,563	376,540	5,902	
5	7/30/2017	80	7,305	8,422	4,306	376,100	6,899	
6	7/30/2017	80	7,474	8,887	4,681	376,140	5,752	
7	7/30/2017	80	7,247	7,700	5,286	374,260	5,733	
8	7/31/2017	80	7,127	8,079	4,585	378,780	5,734	
9	7/31/2017	80	6,834	7,825	4,513	377,440	5,719	
10	7/31/2017	80	6,973	7,449	5,143	370,750	5,681	
11	7/31/2017	81	6,725	7,292	4,713	381,030	5,675	
12	8/1/2017	80	7,033	7,657	4,581	377,200	5,666	
13	8/1/2017	84	7,067	7,728	4,606	376,680	5,656	
14	8/1/2017	97	7,966	8,276	4,474	378,180	5,636	
15	8/1/2017	93	7,836	8,984	4,638	375,600	5,529	
16	8/1/2017	96	7,638	7,972	4,975	377,980	5,563	
17	8/2/2017	84	8,033	9,037	4,563	361,145	5,452	
18	8/2/2017	70	8,457	8,944	4,399	320,600	5,292	
19	8/2/2017	98	7,868	8,240	4,839	379,900	5,476	
20	8/5/2017	93	7,156	7,513	4,759	373,960	5,459	
21	8/6/2017	93	7,045	7,936	4,732	373,560	5,398	
22	8/6/2017	85	6,957	7,978	4,816	374,510	5,680	
23	8/6/2017	90	7,184	7,517	4,728	374,380	5,531	
24	8/6/2017	90	7,117	7,623	5,002	377,780	5,372	
25	8/7/2017	85	6,643	8,683	4,717	377,660	6,289	
26	8/7/2017	89	7,016	8,144	4,608	373,080	5,807	
27	8/7/2017	84	7,118	8,986	4,759	376,760	5,235	
28	8/8/2017	85	6,711	8,576	4,832	376,020	5,257	
29	8/8/2017	89	7,017	8,070	4,655	372,480	5,293	
30	8/8/2017	91	7,010	8,103	4,613	375,335	5,246	
31	8/9/2017	87	6,732	8,362	5,041	376,100	5,188	
32	8/9/2017	86	6,752	8,465	4,873	375,840	5,166	
33	8/9/2017	87	6,803	8,550	5,056	324,720	4,827	
34	8/9/2017	91	6,936	7,703	4,569	372,160	5,113	
35	8/10/2017	87	6,919	8,466	4,609	369,700	5,110	
36	8/10/2017	85	6,742	8,473	4,865	375,460	5,110	
37	8/10/2017	80	8,290	9,188	5,027	377,320	5,552	

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Well Name:

JAMES SEABRIGHT BRK 10H

47009001750000

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	N.A.	N.A.	233.00	233.00	N.A.
Top of Salt Water	829.00	829.00	N.A.	N.A.	N.A.
Pittsburgh Coal	311.00	311.00	316.00	316.00	N.A.
Big Injun (ss)	Not Logged	Not Logged	Not Logged	Not Logged	N.A.
Berea (siltstone)	Not Logged	Not Logged	Not Logged	Not Logged	N.A.
Rhinestreet (shale)	5487.00	5452.00	5725.00	5683.00	N.A.
Cashaqua (shale)	5725.00	5683.00	5779.00	5733.00	N.A.
Middlesex (shale)	5779.00	5733.00	5904.00	5837.00	N.A.
Burket (shale)	5904.00	5837.00	5929.00	5856.00	N.A.
Tully (ls)	5929.00	5856.00	6009.00	5912.00	N.A.
Mahantango (shale)	6009.00	5912.00	6211.00	6016.00	N.A.
Marcellus (shale)	6315.00	6045.00	Not Reached	Not Reached	GAS

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RETTEW

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

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

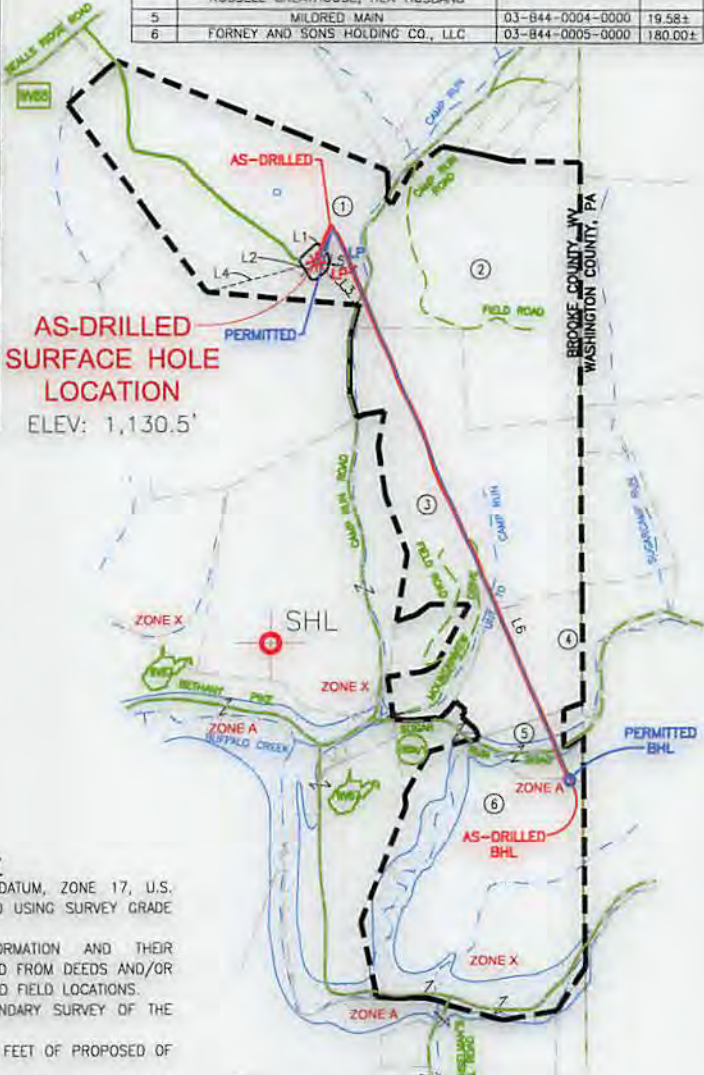
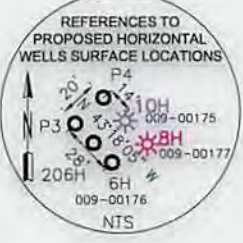
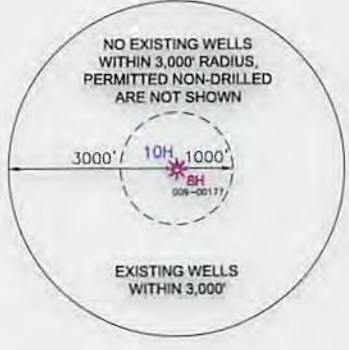
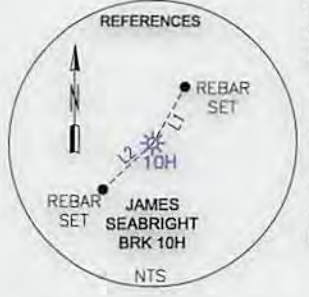
Latitude: 40°15'00" L 8767'
BHL Latitude: 40°12'30" 5526'

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 29°14'55" E	270.45'	SHL TO REF. PNT.	1/2" REBAR SET
L2	S 47°03'29" W	283.42'	SHL TO REF. PNT.	1/2" REBAR SET
L3	S 42°17'57" E	766.90'	SHL TO GIS CORNER	
L4	S 74°39'07" W	1490.12'	SHL TO GIS CORNER	
L5	S 77°58'56" E	480.09'	SHL TO LP	
L6	S 22°59'24" E	7200.39'	LP TO BHL	

AS-DRILLED

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,333.866 EASTING: 539,870.249
LANDING POINT LOCATION (LP): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,303.060 EASTING: 540,012.494
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,282.695 EASTING: 540,869.671
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,333.879 EASTING: 539,870.262
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,452,303.399 EASTING: 540,013.372
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,277.197 EASTING: 540,873.443

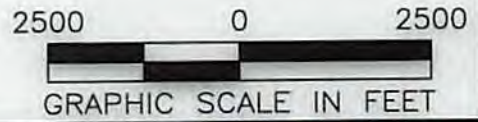
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	JAMES K. SEABRIGHT AND MARTHA MAY SEABRIGHT, HUSBAND AND WIFE, LIFE INTEREST, JAMES H. SEABRIGHT, REMAINDER	03-B39-0008-0000	173.00±
2	JAMES B. CALDWELL	03-B39-0009-0000	182.63±
3	LINDA REEVES GREATHOUSE AND JAMES RUSSELL GREATHOUSE, HER HUSBAND	03-B39-0012-0000	202.41±
4	LINDA REEVES GREATHOUSE AND JAMES RUSSELL GREATHOUSE, HER HUSBAND	03-B44-0003-0000	73.57±
5	MILDRED MAIN	03-B44-0004-0000	19.58±
6	FORNEY AND SONS HOLDING CO., LLC	03-B44-0005-0000	180.00±



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.

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. 2241

<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>COMPANY: SWN Production Company, LLC</p> <p>JAMES SEABRIGHT BRK</p> <p>OPERATOR'S WELL #: 10H</p> <p>API WELL #: 47 009 00175</p> <p>STATE COUNTY PERMIT</p>
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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: SUGARCAMP RUN, BUFFALO CREEK	ELEVATION: 1130.5'
DISTRICT: BUFFALO	COUNTY: BROOKE	QUADRANGLE: BETHANY, WV-PA
SURFACE OWNER: JAMES K. & MARTHA MAY SEABRIGHT; LIFE ESTATE & JAMES H. SEABRIGHT	ACREAGE: 173.00±	
OIL & GAS ROYALTY OWNER: MARTHA MAY SEABRIGHT, LE, & JAMES H. SEABRIGHT	ACREAGE: 173.00±	
DRILL <input 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 type="checkbox"/>	CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) As-Drilled	ESTIMATED DEPTH: 6,198' TVD 13,672' TMD
TARGET FORMATION: MARCELLUS		

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

<p>LEGEND:</p> <ul style="list-style-type: none"> PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD ABANDONED WELL PLUGGED & ABANDONED WELL CUT CONDUCTOR TIE LINE LEASE BOUNDARY ASDRILLED WELLPATH PERMITTED WELLPATH STREAM 	<p>REVISIONS:</p> <p>DATE: 08-22-2017</p> <p>DRAWN BY: G.FLORES</p> <p>SCALE: 1" = 2500'</p> <p>DRAWING NO: 087569036</p> <p>AS-DRILLED PLAT</p>
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