

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

API 47 - 051 - 01845 County MARSHALL District SAND HILL
Quad WHEELING Pad Name B W EDGE MSH PAD Field/Pool Name PANHANDLE FIELD WET
Farm name WILLIAM F. EDGE, JR. & BARBARA EDGE Well Number B W EDGE MSH 5H
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 4,428,556.891 Easting 531,798.297
Landing Point of Curve Northing 4,428,679.820 Easting 531,939.557
Bottom Hole Northing 4,431,050.242 Easting 530,858.649

Elevation (ft) 1253.6' 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 6/18/2015 Date drilling commenced 7/5/2018 Date drilling ceased 07/21/2018
Date completion activities began 02/06/2019 Date completion activities ceased 03/02/2019
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 615 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 930 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 742 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

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Jim Arledge
8/23/19

API 47- 051 - 01845 Farm name WILLIAM F. EDGE, JR. & BARBARA EDGE Well number B W EDGE MSH 5H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/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	800	NEW	J-55/54.50#		Y, 70
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2200	NEW	J-55/36#		Y, 27
Intermediate 2	12.25	9.625					
Intermediate 3							
Production	8.75/8.50	5.5	15428	NEW	P-110/20#		Y
Tubing		2.375	6802	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	850	15.60	1.19	1,011.5	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	814	15.60	1.18	960.52	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2,902	15.60	1.19	3,453.38	SURFACE	24
Tubing							

Drillers TD (ft) 15,428' Loggers TD (ft) 15,428'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5,617'

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

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____ RECEIVED
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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____ MAY 31 2019

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____ WV Department of
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API 47- 051 - 01845 Farm name WILLIAM F. EDGE, JR. & BARBARA EDGE Well number B W EDGE MSH 5H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENT	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	ATTACHMENT	2				

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Please insert additional pages as applicable.

API 47- 051 - 01845 Farm name WILLIAM F. EDGE, JR. & BARBARA EDGE Well number B W EDGE MSH 5H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
MARCELLUS	6,349'	TVD 6,649' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1196 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 6,250 mcfpd Oil 740 bpd NGL _____ bpd Water 840 bpd GAS MEASURED BY Estimated Orifice Pilot

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

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 GROGANS MILL RD City THE WOODLANDS State TX Zip 77380

Cementing Company BJ SERVICES
Address 1036 E. MAIN ST. City BRIDGEPORT State WV Zip 26330

Stimulating Company SWN WELL SERVICES
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Please insert additional pages as applicable.

Completed by BOBBY WILLIS Telephone 832-796-2884 WV Department of
Signature *[Signature]* Title SENIOR REGULATORY ANALYST Date 5/30/2019 Office of Oil and Gas
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Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/7/2019
Job End Date:	2/22/2019
State:	West Virginia
County:	Marshall
API Number:	47-051-01845-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	BW EDGE MSH 5
Latitude:	40.00660600
Longitude:	-80.62744300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,327
Total Base Water Volume (gal):	11,873,364
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
SCAL16486A	Nalco	Scale Inhibitor					
				Listed Below			
	Operator	Base Fluid					
				Listed Below			

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Base Water

Econo-CI200	SWN Well Services	Corrosion Inhibitor											
Sand	SWN Well Services	Proppant				Listed Below							
BIOC11219A	Nalco	Biocide				Listed Below							
HCL	SWN Well Services	Solvent				Listed Below							
SWN FRW-13LA	SWN Well Services	Friction Reducer				Listed Below							
Ecopol-FEAC	SWN Well Services	Iron Control				Listed Below							
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.													
						7732-18-5	Water		100.00000	84.71254	Density = 8.345		
						14808-60-7	Crystalline Silica, quartz		100.00000	14.67436			
						7732-18-5	Water		85.00000	0.47493			
						7647-01-0	Hydrochloric Acid		15.00000	0.07300			
						64742-47-8	Petroleum Distillates, Hydrotreated		23.00000	0.02118			
						67-56-1	Methanol		60.00000	0.01529			
						68424-85-1	Benzyl-(C12-C16 Alky)-Dimethyl-Ammonium		30.00000	0.00764			
						12125-02-9	Ammonium Chloride		5.00000	0.00460			

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					93-83-4	4.50000	0.00414
				Oleic Acid Diethanolamide			
				Alcohols, C12-16, Ethoxylated	68551-12-2	4.50000	0.00414
				Chloride Glutaraldehyde	111-30-8	10.00000	0.00255
				Ethylene glycol	107-21-1	30.00000	0.00168
				Amine Triphosphate	Proprietary	30.00000	0.00168
				Acetic Acid	64-19-7	37.50000	0.00094
				Methanol	67-56-1	80.00000	0.00060
				Citric Acid	77-92-9	22.50000	0.00056
				Oxyalkylated fatty acid	68951-67-7	9.67400	0.00007
				Fatty acids	61790-12-3	5.02700	0.00004
				Modified thiourea polymer	68527-49-1	4.74600	0.00004
				Potassium acetate	127-08-2	0.02200	0.00000
				Formaldehyde	50-00-0	0.00400	0.00000

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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**B W EDGE MSH 5
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	1/27/2019	15,339	15,240	36
2	2/7/2019	15,216	15,094	42
3	2/7/2019	15,073	14,954	42
4	2/7/2019	14,936	14,814	42
5	2/8/2019	14,791	14,674	42
6	2/8/2019	14,656	14,536	42
7	2/8/2019	14,516	14,394	42
8	2/9/2019	14,376	14,254	42
9	2/9/2019	14,236	14,114	42
10	2/9/2019	14,096	13,974	42
11	2/10/2019	13,956	13,834	42
12	2/11/2019	13,816	13,694	42
13	2/11/2019	13,676	13,554	42
14	2/12/2019	13,536	13,414	42
15	2/12/2019	13,396	13,274	42
16	2/12/2019	13,251	13,134	42
17	2/12/2019	13,116	12,994	42
18	2/13/2019	12,976	12,854	42
19	2/13/2019	12,836	12,714	42
20	2/13/2019	12,696	12,574	42
21	2/13/2019	12,552	12,434	42
22	2/14/2019	12,416	12,294	42
23	2/14/2019	12,276	12,154	42
24	2/14/2019	12,130	12,014	42
25	2/14/2019	11,996	11,874	42
26	2/15/2019	11,856	11,734	42
27	2/15/2019	11,716	11,594	42
28	2/15/2019	11,576	11,454	42
29	2/15/2019	11,436	11,314	42
30	2/15/2019	11,296	11,174	42
31	2/16/2019	11,156	11,034	42
32	2/16/2019	11,016	10,894	42
33	2/16/2019	10,876	10,754	42
34	2/16/2019	10,736	10,614	42
35	2/16/2019	10,597	10,474	42
36	2/17/2019	10,456	10,334	42
37	2/17/2019	10,316	10,194	42
38	2/17/2019	10,176	10,054	42
39	2/17/2019	10,036	9,916	42
40	2/18/2019	9,896	9,774	42
41	2/18/2019	9,756	9,634	42
42	2/18/2019	9,616	9,494	42
43	2/18/2019	9,476	9,354	42

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**B W EDGE MSH 5
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
44	2/18/2019	9,336	9,214	42
45	2/18/2019	9,196	9,074	42
46	2/19/2019	9,056	8,934	42
47	2/19/2019	8,916	8,794	42
48	2/19/2019	8,776	8,654	42
49	2/19/2019	8,636	8,514	42
50	2/19/2019	8,498	8,374	42
51	2/19/2019	8,354	8,234	42
52	2/20/2019	8,216	8,094	42
53	2/20/2019	8,076	7,956	42
54	2/20/2019	7,936	7,814	42
55	2/20/2019	7,796	7,674	42
56	2/21/2019	7,656	7,534	42
57	2/21/2019	7,516	7,394	42
58	2/21/2019	7,376	7,254	42
59	2/21/2019	7,236	7,114	42
60	2/21/2019	7,096	6,974	42
61	2/22/2019	6,951	6,840	36

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**B W EDGE MSH 5
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/other
1	2/6/2019	76	7,241	5,446	3,767	289,405	4,973	0
2	2/7/2019	86	7,550	5,241	4,708	302,240	5,498	0
3	2/7/2019	84	7,108	4,985	5,204	278,780	5,065	0
4	2/8/2019	88	7,394	4,774	4,462	286,540	5,052	0
5	2/8/2019	91	7,562	4,295	4,265	280,930	5,378	0
6	2/8/2019	91	7,493	4,455	4,507	282,090	5,338	0
7	2/8/2019	91	7,150	5,014	5,220	279,840	4,859	0
8	2/9/2019	90	7,359	4,380	5,434	286,800	4,970	0
9	2/9/2019	97	7,597	5,350	4,430	286,820	5,348	0
10	2/9/2019	95	7,304	5,248	5,214	278,610	5,008	0
11	2/11/2019	92	7,070	5,002	5,090	284,930	5,131	0
12	2/11/2019	92	6,596	5,154	4,456	287,810	6,946	0
13	2/11/2019	90	7,193	4,135	4,977	278,780	5,076	0
14	2/12/2019	90	7,154	4,543	4,401	279,420	4,827	0
15	2/12/2019	97	7,522	4,789	4,467	291,310	5,070	0
16	2/12/2019	91	7,369	4,776	4,590	291,310	4,730	0
17	2/13/2019	88	7,161	5,087	5,307	284,610	4,771	0
18	2/13/2019	89	6,706	4,622	4,628	281,440	4,743	0
19	2/13/2019	89	6,848	4,664	4,628	282,150	6,156	0
20	2/14/2019	91	7,211	5,046	4,704	287,410	4,377	0
21	2/14/2019	92	7,063	4,895	4,906	281,400	4,572	0
22	2/14/2019	91	7,274	5,286	4,500	283,250	4,809	0
23	2/14/2019	91	7,689	5,262	4,472	291,030	4,944	0
24	2/14/2019	94	7,524	5,262	4,537	283,900	4,693	0
25	2/14/2019	89	7,430	5,247	4,458	290,990	4,680	0
26	2/15/2019	84	7,467	5,559	4,856	285,070	4,754	0
27	2/15/2019	88	7,873	5,155	4,554	265,750	4,991	0
28	2/15/2019	89	7,322	5,793	4,534	285,320	4,575	0
29	2/15/2019	90	7,492	5,484	5,180	287,700	4,512	0
30	2/15/2019	94	7,199	5,225	5,090	281,280	4,766	0
31	2/16/2019	91	7,085	5,330	4,878	287,120	4,688	0
32	2/16/2019	93	7,296	5,436	4,360	273,360	4,443	0
33	2/16/2019	87	7,189	5,263	4,432	273,360	4,428	0
34	2/16/2019	93	7,055	5,084	4,985	290,250	4,493	0
35	2/17/2019	93	6,942	5,325	5,079	290,510	4,714	0
36	2/17/2019	90	7,204	4,428	5,079	291,250	4,209	0
37	2/17/2019	89	7,623	5,995	4,630	258,907	4,303	0
38	2/17/2019	93	7,032	5,355	5,236	286,160	4,709	0
39	2/17/2019	93	6,992	5,185	5,426	287,620	4,503	0
40	2/18/2019	93	6,794	4,949	4,995	289,640	4,457	0
41	2/18/2019	93	7,139	4,955	4,520	277,390	4,533	0
42	2/18/2019	93	7,086	5,572	4,493	277,390	4,259	0
43	2/18/2019	92	6,930	4,714	4,999	277,390	4,104	0
44	2/18/2019	94	6,731	5,117	5,051	284,720	4,431	0
45	2/19/2019	92	6,651	4,918	6,907	283,280	4,313	0
46	2/19/2019	92	6,782	5,210	4,943	293,420	4,241	0
47	2/19/2019	94	7,035	4,805	4,297	293,420	4,181	0
48	2/19/2019	93	6,759	4,800	4,021	293,420	4,071	0
49	2/19/2019	92	6,878	4,801	5,216	277,750	3,907	0
50	2/19/2019	93	6,685	4,815	5,113	278,150	3,945	0
51	2/20/2019	92	6,899	5,187	4,311	287,040	4,581	0
52	2/20/2019	93	6,865	4,794	4,885	286,070	4,087	0
53	2/20/2019	92	6,834	5,780	4,723	276,760	4,084	0

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**B W EDGE MSH 5
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
54	2/20/2019	97	6,551	4,005	4,923	277,310	4,242	0
55	2/21/2019	98	6,796	3,590	4,804	282,230	4,189	0
56	2/21/2019	95	6,661	5,104	4,385	283,820	4,105	0
57	2/21/2019	95	7,130	5,861	4,174	270,680	3,944	0
58	2/21/2019	96	6,782	5,668	4,445	282,650	3,873	0
59	2/21/2019	91	7,143	4,937	4,704	287,160	4,525	0
60	2/21/2019	95	7,133	5,292	4,976	284,520	4,275	0
61	2/22/2019	92	6,984	5,211	4,306	245,812	4,777	0



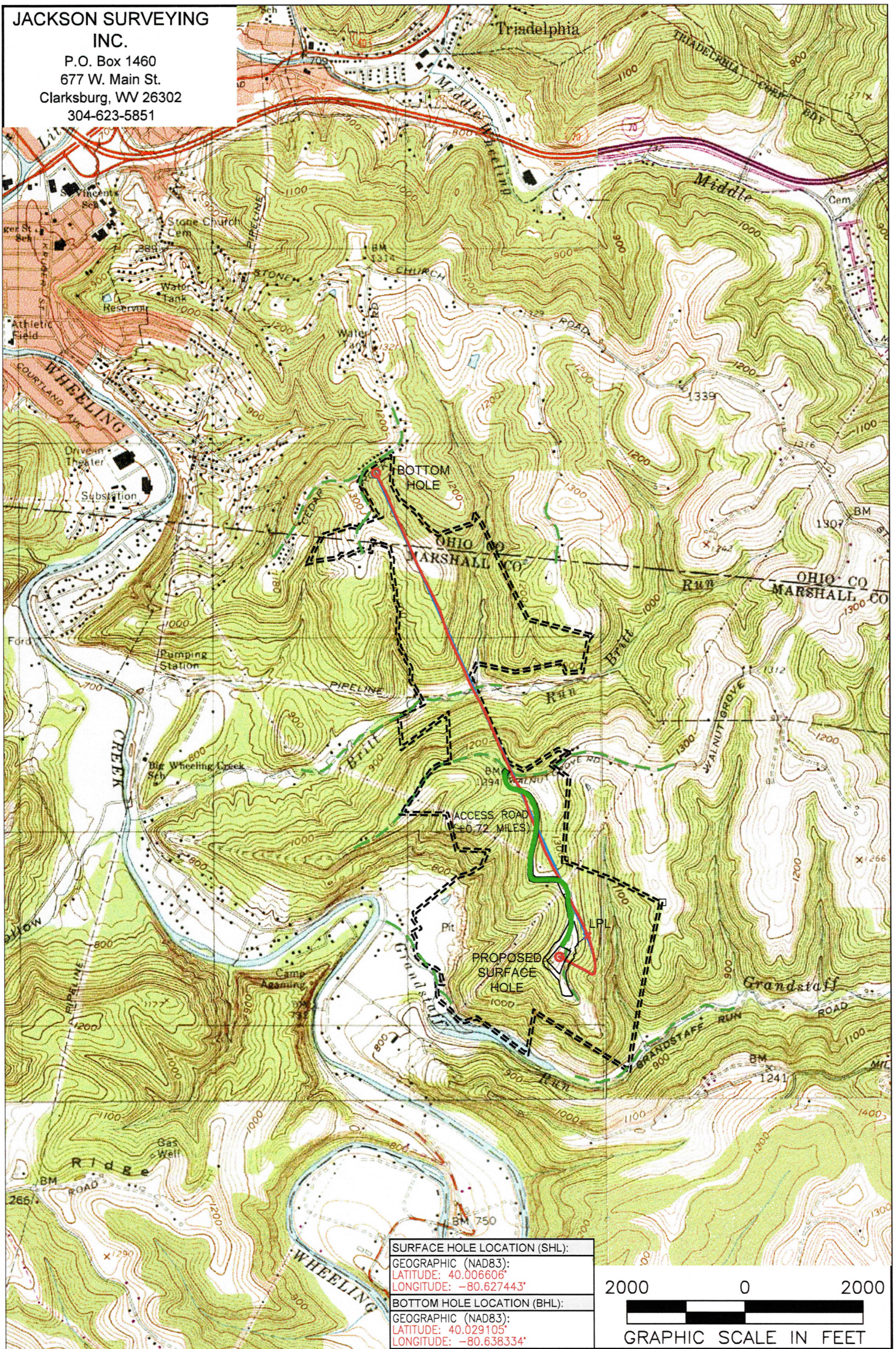
Well Name: BW Edge MSH 5H

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	0.00	0.00	615.00	615.00	
Top of Salt Water	930.00	930.00	NA	NA	
Pittsburgh Coal	742.00	742.00	751.00	751.00	
Pottsville (ss)	843.00	843.00	1134.00	1134.00	
Raven Cliff (ss)	1134.00	1134.00	1825.00	1825.00	
Big Injun (ss)	1825.00	1825.00	5847.00	5764.00	
Rhinstreet (shale)	5847.00	5764.00	6152.00	6047.00	
Cashaqua (shale)	6152.00	6047.00	6239.00	6120.00	
Middlesex (shale)	6239.00	6120.00	6342.00	6197.00	
Burket (shale)	6342.00	6197.00	6374.00	6219.00	
Tully (ls)	6374.00	6219.00	6424.00	6250.00	
Mahantango (shale)	6424.00	6250.00	6649.00	6349.00	
Marcellus (shale)	6649.00	6349.00	NA	NA	GAS

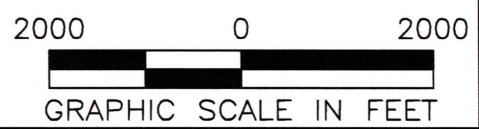
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**JACKSON SURVEYING
INC.**

P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.006606°
LONGITUDE: -80.627443°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.029105°
LONGITUDE: -80.638334°



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: BW EDGE MSH	WELL # 5H	SERIAL #
ADDRESS: 1300 FORT PIERPONT RD., SUITE 200 MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT; SAND HILL	
SURFACE OWNER: WILLIAM F. EDGE, JR. & BARBARA EDGE	USGS 7 1/2 QUADRANGLE MAP NAME WHEELING, WV-OHI	API #: 47-051-01845	

Latitude: 40°02'30"

SURFACE HOLE 684'

Latitude: 40°02'30" BOTTOM HOLE

3733'

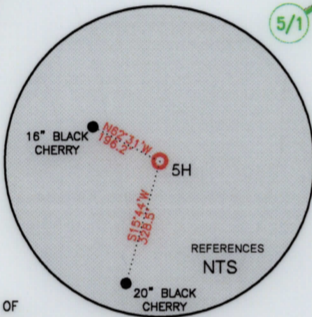
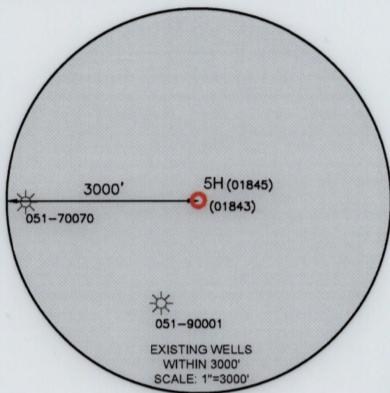
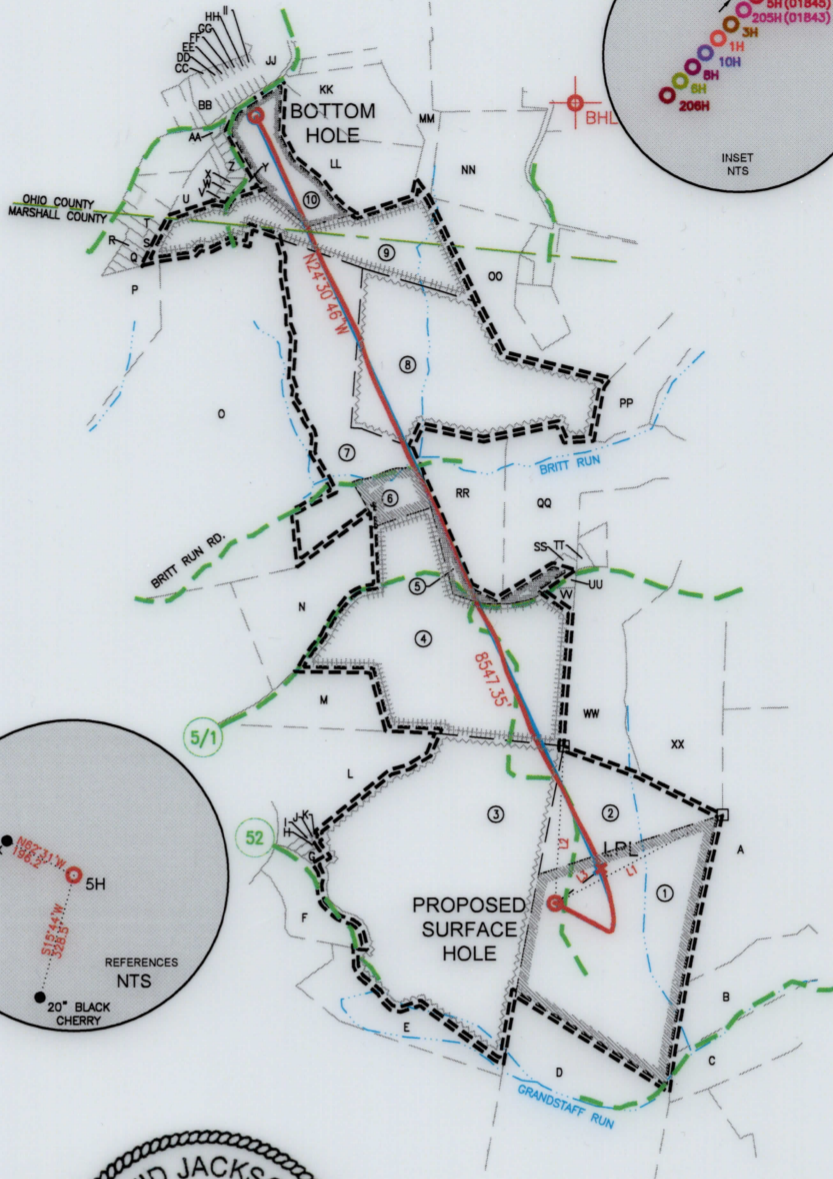
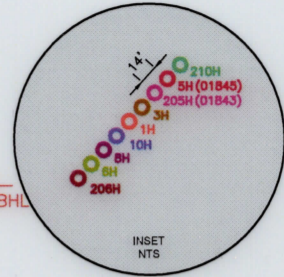
JACKSON SURVEYING INC.

P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,428,556.883
EASTING: 531,798.328
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,428,664.715
EASTING: 531,938.271
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,431,048.009
EASTING: 530,855.991
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,428,556.891
EASTING: 531,798.297
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,428,679.820
EASTING: 531,939.557
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,431,050.242
EASTING: 530,858.649

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

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 62°08'19" E	1976.14'	SHL TO LANDMARK	5/8" REBAR
L2	S 03°20'30" E	1635.63'	SHL TO LANDMARK	5/8" REBAR
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	N 48°58'09" E	614.37'	1397.22'	SHL TO LPL



WELL RESTRICTIONS

- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

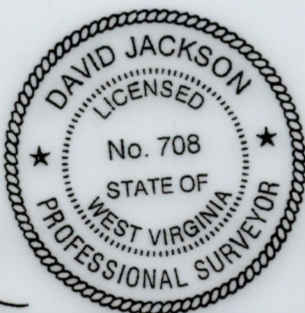
NOTES ON SURVEY

- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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. 708

David L Jackson



2000 0 2000

GRAPHIC SCALE IN FEET

COMPANY: **SWN** Production Company, LLC

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	BW EDGE MSH
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	OPERATOR'S WELL #: 5H API WELL #: 47 STATE 051 COUNTY 01845 PERMIT

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"/>	ELEVATION: 1253.6'
WATERSHED: UPPER OHIO SOUTH	QUADRANGLE: WHEELING, WV-OHIO
DISTRICT: SAND HILL COUNTY: MARSHALL	ACREAGE: ±87.8
SURFACE OWNER: WILLIAM F. EDGE, JR. & BARBARA EDGE	ACREAGE: ±115.8
OIL & GAS ROYALTY OWNER: JOSEPHINE FLETCHER	
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) ASDRILLED	ESTIMATED DEPTH: 6,380' TVD 15,428' TMD
TARGET FORMATION: MARCELLUS	

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT RD., SUITE 200	ADDRESS: 1300 FORT PIERPONT RD., SUITE 200
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	CITY: MORGANTOWN STATE: WV ZIP CODE: 26508


LEGEND:	SURVEYED BOUNDARY DRILLING UNIT LEASE BOUNDARY ASDRILLED PATH PROPOSED PATH	REVISIONS: DATE: 05-16-2019 DRAWN BY: N. MANO SCALE: 1" = 2000' DRAWING NO: WELL LOCATION PLAT
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**JACKSON SURVEYING
INC.**

P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	WILLIAM F. EDGE JR. & BARBARA EDGE (S)/ JOSEPHINE FLETCHER (R)	12-09-08
TRACT	SURFACE OWNER	TAX PARCEL
2	WILLIAM F. EDGE JR. & BARBARA EDGE	12-09-8.1
3	GWAINE FOLMAR	12-01-19
4	MARK M. SCHELLHASE, ET UX	12-01-18
5	VIOLET S. MILLER	12-01-18.3
6	STEPHEN M. BARTOLOVICH	12-01-18.4
7	STEPHEN M. BARTOLOVICH, ET AL	12-01-11
8	MICHAEL L. & TYLENE R. COFFIELD	12-01-13
9	WALTER L. HARTMAN, ET UX	12-01-10.1
10	RAYMOND A. CAPPONE & KAREN CAPPONE	06-T17-15

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	CHESTER A. GIZA, ET UX	12-02-14
B	ROBERT A. ISALY SR, EST	12-02-13
C	WILLIAM & LORI ANN GIBSON	12-09-12
D	ROBERT A. ISALY SR., EST	12-09-9
E	WHEELING CREEK WATERSHED COMMUNITY	12-09-6.1
F	SANDRA L. HADSELL	12-01-20
G	GRACE ANN KENNEDY	12-01-22
H	GREGORY SCOTT FRAZIER	12-01-22
I	PAULA SUE MUFFENY	12-01-27
J	GREGORY SCOTT FRAZIER	12-01-27.1
K	PAULA SUE MUFFENY	12-01-27.2
L	GEORGE & LAURIE ADASE	12-01-28
M	GEORGE & LAURIE ADASE	12-01-29
N	ANNA LEASURE	12-01-30
O	MICHAEL L. & TYLENE R. COFFIELD	12-01-10
P	MARY SCHENK & GARY P. HAMILTON	12-01-5.1
Q	LONNIE A. SNYDER	12-1A-83
R	LONNIE A. SNYDER	12-1A-83.2
S	DAVID A. STALEY, ET UX	12-1A-77
T	ALBERT R. YOUNG, SR.	6-T17B-321
U	WALTER L. & GLORIA L. HARTMAN	6-T17-17
V	JERALD L. & KIMBERLY E. HETZEL	6-T17-17.1
W	DANIEL P. & LAURA S. HOLMES	6-T17-17.2
X	DEBRA A. FERRER	6-T17-17.3
Y	WALTER L. & GLORIA L. HARTMAN	6-T17-17.11
Z	JOSEPH D. & ANGEL L. HALL	6-T17-17.4
AA	WALTER L. & GLORIA L. HARTMAN	6-T17C-4.1
BB	WALTER L. & GLORIA L. HARTMAN	6-T17C-4
CC	JACK M. & G. J. TAYLOR	6-T17C-5.3
DD	MARSHA M. WOODS	6-T17C-5.4
EE	RICHARD A. & C. K. BONAR	6-T17C-5.2
FF	ROBERT JEFFREY MCCONNELL	6-T17C-5.1
GG	MARY ANN & ETTER ARNOLD KUHL JR.	6-T17C-5
HH	STEPHANIE M. KING	6-T17C-6
II	TERRY L. KENT	6-T17C-7
JJ	SAMUEL E. STRAIGHT	6-T17C-8
KK	GREGORY W. & JILL ANN BEALL	6-T17C-9.1
LL	GREGORY W. & JILL ANN BEALL	6-T17C-9.3
MM	RIDGE RUNNER FARM LLC	6-T12-14
NN	ROBERT H. & M.J. DAVIS	6-T17-13
OO	PATRICK J. LENZ	12-01-46
PP	PATRICK J. LENZ	12-01-14.1
QQ	KENNETH L. MCNINCH, ET UX	12-01-14
RR	PETE E. MALARSKI, ET UX	12-01-12
SS	VIOLET D. MILLER	12-01-18.1
TT	ARTHUR W. STRICKLIN, ET UX	12-01-15.1
UU	CHESTER L. SMITH, ET UX	12-01-18.2
VV	MARK A. & ANDREA SCHELLHASE	12-01-18.5
WW	CHESTER A. GIZA, ET UX	12-01-15
XX	CHESTER A. GIZA, ET UX	12-01-16

REVISIONS:	COMPANY:		
		SWN Production Company, LLC	
	OPERATOR'S	BW EDGE MSH	API #:
	WELL #:	5H	47-051-01845
	DISTRICT:	COUNTY:	STATE:
	SAND HILL	MARSHALL	WV
			DATE: 05-16-2019
			BY: L. MIND
			SCALE: N/A
			PLAT 2