

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

API 47 - 009 - 00304 County BROOKE District CROSS CREEK  
Quad STEBENVILLE EAST, OH Pad Name STATE OF WV DNR A BRK PAD Field/Pool Name PANHANDLE FIELD WET  
Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well Number STATE OF WV DNR A 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 4,463,508.51 Easting 539,494.33  
Landing Point of Curve Northing 4,463,545.62 Easting 539,693.01  
Bottom Hole Northing 4,466,976.28 Easting 538,119.48

Elevation (ft) 1,140' 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

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Date permit issued 2/7/2020 Date drilling commenced 9/02/2020 Date drilling ceased 9/16/2020  
Date completion activities began 1/01/2021 Date completion activities ceased 2/11/2021  
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 542 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 692 Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 99 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
B.S.  
08/27/2021

API 47-009 - 00304 Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well number STATE OF WV DNR A 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	125	NEW	J-55/94#		Y
Surface	17.5	13.375	646	NEW	J-55/54.50#	561.1	Y, 21 BBLS
Coal							
Intermediate 1	12.25	9.625	1,453	NEW	J-55/36#		Y, 34 BBLS
Intermediate 2	12.25	9.625					
Intermediate 3							
Production	8.75/8.50	6.5	18,617	NEW	P-110HP/20#		Y, 30 BBLS
Tubing		2.375	6,214	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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	584	15.60	1.20	700.8	SURFACE	8
Coal							
Intermediate 1	CLASS A	593	15.60	1.19	705.67	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,576	15.60	1.19	4,255.44	SURFACE	24
Tubing							

Drillers TD (ft) 18,617 Loggers TD (ft) 18,617

Deepest formation penetrated \_\_\_\_\_ Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) \_\_\_\_\_

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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Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well number STATE OF WV DNR A 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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PRODUCING FORMATION(S) MARCELLUS DEPTHS 5,664' TVD 5,969' MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2385 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 3,957 mcfpd Oil 648 bpd NGL \_\_\_\_\_ bpd Water 1,560 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 <sub>2</sub> S, ETC)
	0		0		
	SEE	ATTACHMENT	3		

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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 ROAD City THE WOODLANDS State TX Zip 77380

Cementing Company SCHLUMBERGER WELL SERVICES  
Address 1080 US-33 City WESTON State WV Zip 26452

Stimulating Company SWN DRILLING COMPANY  
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  
Signature  Title SENIOR REGULATORY ANALYST Date 4/19/2021

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

08/27/2021

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/2/2021
Job End Date:	1/24/2021
State:	West Virginia
County:	Brooke
API Number:	47-009-00304-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	STATE OF WV DNR A BRK 5
Latitude:	40.32116899
Longitude:	-80.53513400
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,624
Total Base Water Volume (gal):	19,515,906
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
Base Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	88.43017	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.24795	

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HCL	SWN Well Services	Solvent					
				Listed Below			
SWN FRW-11LC	SWN Well Services	Friction Reducer					
				Listed Below			
Econo-CI200	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Tolicide PS 50A	SWN Well Services	Biocide					
				Listed Below			
Plexaid 655WG	SWN Well Services	Scale Inhibitor					
				Listed Below			
Sand	SWN Well Services	Proppant					
				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.

		Crystalline Silica, quartz	14808-60-7	100.00000	11.25159
		Hydrochloric Acid	7647-01-0	15.00000	0.03218
		Petroleum Distillates, Hydrotreated	64742-47-8	25.00000	0.01963
		Tetrakis	55566-30-8	55.00000	0.00947
		Glycerin	56-81-5	50.00000	0.00325

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			Ammonium Chloride	12125-02-9	2.00000	0.00157	
			Alcohols, C12-1, ethoxylated	68551-12-2	1.50000	0.00118	
			Oleic Acid Diethanolamide	93-83-4	1.50000	0.00118	
			Diethylenetriamine penta	15827-60-8	10.00000	0.00065	
			Acetic Acid	64-19-7	37.50000	0.00043	
			Methanol	67-56-1	80.00000	0.00026	
			Citric Acid	77-92-9	22.50000	0.00026	
			Acrylic acid terpolymer	397256-50-7	1.00000	0.00017	
			Oxyalkylated fatty acid	68951-67-7	9.67400	0.00003	
			Fatty acids	61790-12-3	5.02700	0.00002	
			Modified thiourea polymer	68527-49-1	4.74600	0.00002	
			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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ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	12/22/2020	18,554	18,466	36
2	1/2/2021	18,432	18,255	36
3	1/3/2021	18,221	18,044	36
4	1/3/2021	18,011	17,834	36
5	1/4/2021	17,800	17,623	36
6	1/4/2021	17,590	17,413	36
7	1/5/2021	17,379	17,202	36
8	1/5/2021	17,169	16,992	36
9	1/5/2021	16,958	16,781	36
10	1/6/2021	16,748	16,571	36
11	1/6/2021	16,537	16,360	36
12	1/7/2021	16,327	16,147	36
13	1/7/2021	16,116	15,939	36
14	1/8/2021	15,906	15,728	36
15	1/8/2021	15,695	15,518	36
16	1/9/2021	15,485	15,307	36
17	1/9/2021	15,274	15,097	36
18	1/10/2021	15,064	14,886	36
19	1/10/2021	14,857	14,676	36
20	1/10/2021	14,643	14,465	36
21	1/11/2021	14,432	14,255	36
22	1/11/2021	14,222	14,044	36
23	1/11/2021	14,011	13,834	36
24	1/12/2021	13,801	13,623	36
25	1/12/2021	13,590	13,413	36
26	1/12/2021	13,380	13,202	36
27	1/13/2021	13,169	12,992	36
28	1/13/2021	12,959	12,781	36
29	1/13/2021	12,748	12,571	36
30	1/14/2021	12,538	12,360	36
31	1/14/2021	12,327	12,150	36
32	1/14/2021	12,117	11,939	36
33	1/15/2021	11,906	11,729	36
34	1/15/2021	11,696	11,518	36
35	1/15/2021	11,485	11,308	36
36	1/16/2021	11,275	11,097	36
37	1/16/2021	11,064	10,887	36
38	1/17/2021	10,854	10,676	36
39	1/17/2021	10,643	10,466	36
40	1/17/2021	10,433	10,255	36
41	1/18/2021	10,222	10,045	36
42	1/18/2021	10,012	9,834	36
43	1/18/2021	9,801	9,628	36
44	1/19/2021	9,591	9,413	36
45	1/19/2021	9,384	9,203	36
46	1/20/2021	9,168	8,992	36
47	1/20/2021	8,959	8,782	36
48	1/20/2021	8,749	8,571	36
49	1/21/2021	8,538	8,361	36
50	1/21/2021	8,328	8,150	36
51	1/21/2021	8,117	7,940	36
52	1/22/2021	7,907	7,729	36
53	1/22/2021	7,696	7,519	36
54	1/22/2021	7,486	7,308	36
55	1/22/2021	7,275	7,098	36
56	1/23/2021	7,065	6,887	36
57	1/23/2021	6,854	6,677	36
58	1/23/2021	6,644	6,466	36
59	1/24/2021	6,433	6,256	36

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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	1/2/2021	90.13	7,988	6,554	3,755	247,980	7,150	0
2	1/2/2021	92.4	8,072	5,149	4,382	358,020	8,744	0
3	1/3/2021	99.33	8,215	5,451	4,476	357,800	8,857	0
4	1/4/2021	92.56	8,144	5,148	4,865	357,260	8,440	0
5	1/4/2021	99.1	8,160	5,266	4,252	356,180	8,270	0
6	1/5/2021	97	8,031	5,765	4,756	351,820	8,349	0
7	1/5/2021	93.9	7,738	6,243	4,359	356,340	8,228	0
8	1/5/2021	90.2	8,166	5,831	4,583	357,520	8,309	0
9	1/6/2021	96.9	7,995	5,699	4,673	362,160	8,352	0
10	1/6/2021	91.6	7,941	5,106	4,368	358,060	7,888	0
11	1/7/2021	90.7	7,748	5,681	4,698	359,220	8,154	0
12	1/7/2021	87.1	8,188	5,340	4,244	351,200	8,020	0
13	1/8/2021	89.9	7,779	5,170	4,588	360,760	8,048	0
14	1/8/2021	88.8	8,118	6,557	4,807	355,000	7,769	0
15	1/9/2021	89.5	7,925	5,489	4,295	356,400	8,023	0
16	1/9/2021	91.9	8,011	5,479	4,522	356,220	7,943	0
17	1/9/2021	89.4	7,909	4,601	4,394	360,060	8,006	0
18	1/10/2021	90.4	8,009	6,005	4,260	361,540	7,880	0
19	1/10/2021	89.6	7,949	5,018	4,451	356,720	7,731	0
20	1/11/2021	90.1	8,127	4,877	4,826	361,640	8,169	0
21	1/11/2021	86.2	8,028	4,980	4,372	356,620	7,835	0
22	1/11/2021	90.1	7,998	6,167	4,352	353,560	7,744	0
23	1/11/2021	91.1	8,095	4,228	4,329	351,100	7,685	0
24	1/12/2021	90.4	7,784	5,812	4,434	355,540	7,852	0
25	1/12/2021	94.7	7,729	5,102	4,264	354,040	7,878	0
26	1/12/2021	90.8	7,983	4,886	4,457	362,580	7,996	0
27	1/13/2021	97.1	7,582	5,612	4,260	356,160	7,926	0
28	1/13/2021	96.1	7,795	6,103	4,406	354,980	7,705	0
29	1/14/2021	95.8	7,911	4,268	4,430	356,760	7,942	0
30	1/14/2021	98	7,725	5,358	4,427	356,940	7,899	0
31	1/14/2021	96.5	7,641	6,121	4,396	356,100	7,933	0
32	1/15/2021	90.2	7,862	5,787	4,465	347,620	7,889	0
33	1/15/2021	96.4	7,883	5,783	4,493	358,140	7,757	0
34	1/15/2021	97.5	7,852	5,937	4,649	359,080	7,821	0
35	1/16/2021	96.8	7,486	4,268	4,480	362,520	7,902	0
36	1/16/2021	97	7,333	6,204	4,383	357,700	7,823	0
37	1/17/2021	98.2	7,300	5,498	4,490	355,600	7,833	0
38	1/17/2021	98.5	7,572	5,590	4,125	359,580	7,810	0
39	1/17/2021	94	7,698	5,746	4,387	356,060	8,214	0
40	1/18/2021	97.9	7,414	4,664	4,384	361,020	7,935	0
41	1/18/2021	97.1	7,672	6,241	4,278	363,380	7,729	0
42	1/18/2021	99.1	7,278	5,740	4,188	356,580	7,838	0
43	1/19/2021	100	7,206	6,230	4,365	357,240	7,992	0
44	1/19/2021	97.45	7,300	5,786	4,215	358,940	8,543	0
45	1/20/2021	99	7,019	5,689	4,288	351,440	8,200	0
46	1/20/2021	97.92	6,828	6,046	4,508	353,260	9,425	0
47	1/20/2021	100.4	7,436	6,238	4,251	352,680	7,300	0
48	1/20/2021	100	6,816	6,211	4,201	348,040	7,257	0
49	1/21/2021	100	7,130	6,084	4,455	354,240	7,600	0
50	1/21/2021	100	7,217	6,028	4,580	360,360	7,591	0
51	1/21/2021	100	7,085	6,123	4,300	347,600	7,401	0
52	1/22/2021	100	6,938	5,718	4,628	352,500	7,504	0
53	1/22/2021	100	6,801	5,872	4,431	354,180	7,576	0
54	1/22/2021	100	6,852	5,983	4,263	354,060	7,413	0
55	1/23/2021	100	6,549	6,124	4,390	355,120	7,463	0
56	1/23/2021	100	6,943	6,189	4,285	350,320	7,586	0
57	1/23/2021	87.13	7,625	6,028	4,037	178,120	6,182	0
58	1/24/2021	100	6,384	5,341	4,202	350,760	7,430	0
59	1/24/2021	95.73	7,372	5,649	4,670	349,430	7,530	0

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Well Name:

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47009003040000

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	542.00	542.00	
Top of Salt Water	692.00	692.00	NA	NA	
Pittsburgh Coal	99.00	99.00	340.00	340.00	
Pottsville (ss)	340.00	340.00	691.00	691.00	
Raven Cliff (ss)	691.00	691.00	945.00	945.00	
Maxton (ss)	945.00	945.00	1243.00	1242.00	
Big Injun (ss)	1243.00	1242.00	1392.00	1392.00	
Berea (siltstone)	1755.00	1754.00	5324.00	5162.00	
Rhinstreet (shale)	5324.00	5162.00	5589.00	5404.00	
Cashaqua (shale)	5589.00	5404.00	5647.00	5453.00	
Middlesex (shale)	5647.00	5453.00	5723.00	5511.00	
Burket (shale)	5723.00	5511.00	5743.00	5526.00	
Tully (ls)	5743.00	5526.00	5829.00	5586.00	
Mahantango (shale)	5829.00	5586.00	5969.00	5664.00	
Marcellus (shale)	5969.00	5664.00	NA	NA	GAS

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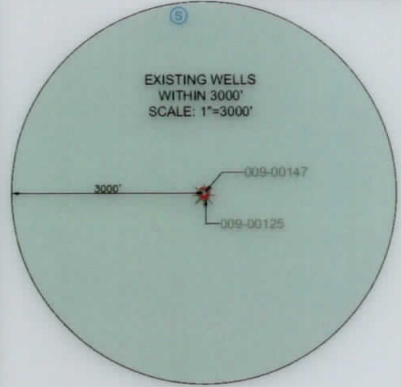
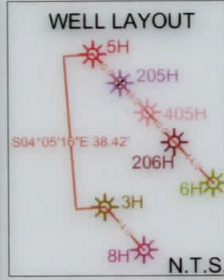
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(2000' SCALE) LATITUDE: 40°20'00" SURFACE HOLE

9797'

(2000' SCALE) LATITUDE: 40°22'30" BOTTOM HOLE

2616'



LINE	BEARING	DISTANCE
L1	N30°01'26"W	1580.25'
L2	S15°52'26"W	1431.47'



4432'  
 8207'  
 (2000' SCALE) LONGITUDE: 80°30'00" SURFACE HOLE  
 (2000' SCALE) LONGITUDE: 80°32'30" BOTTOM HOLE

<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4463508.51 EASTING: 539494.33
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4463545.62 EASTING: 539693.01
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4466976.28 EASTING: 538119.48
<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4463508.51 EASTING: 539494.33
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4463562.15 EASTING: 539691.53
<b>TURNING POINT LOCATION (TPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4465270.59 EASTING: 538802.08
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4466977.07 EASTING: 538121.89

- NOTES ON SURVEY**
- COORDINATE 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/OR FIELD LOCATIONS.
  - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
  - NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
  - 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 THE LIMITS OF DISTURBANCE.
  - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



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. 2041

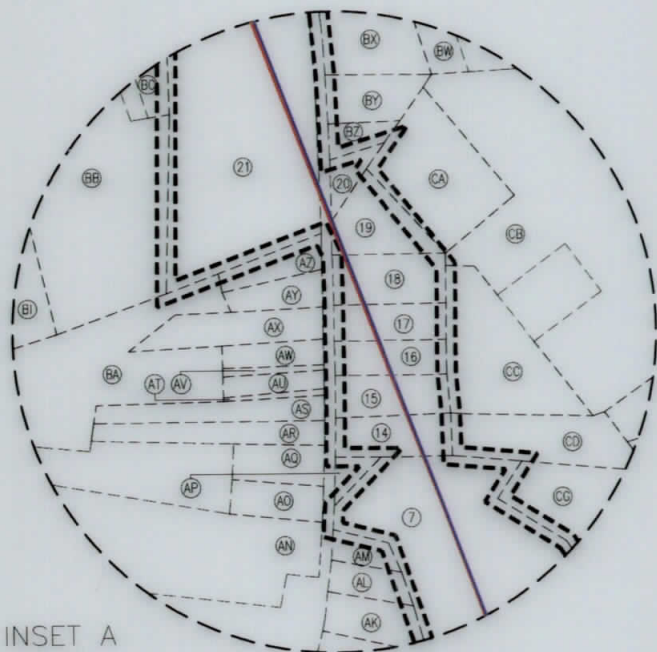
COMPANY: **SWN** Production Company, LLC

(+) 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 ELEVATION: GRADE GPS (NAVD 88, US FT)	STATE OF WV DNR A OPERATOR'S WELL #: BRK 5H  API WELL #: 47 009 304 STATE COUNTY PERMIT
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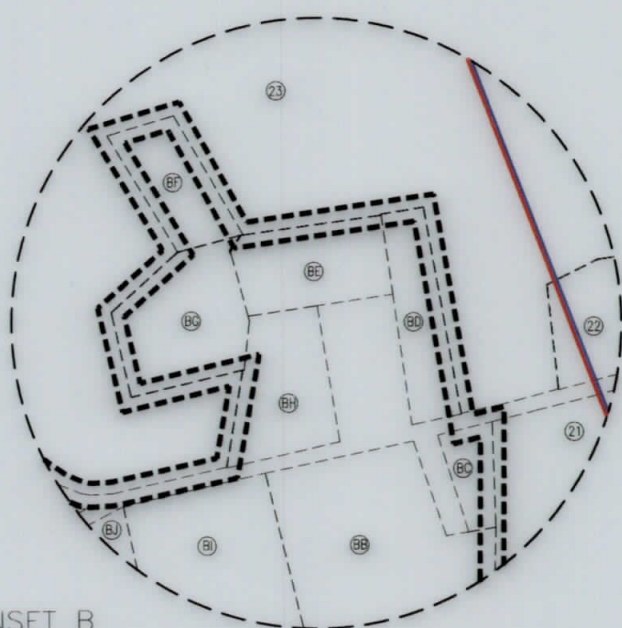
WELL TYPE: OIL	WASTE DISPOSAL	PRODUCTION <input checked="" type="checkbox"/>	DEEP	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	STORAGE	SHALLOW <input checked="" type="checkbox"/>
WATERSHED: UPPER OHIO NORTH			COUNTY: BROOKE			ELEVATION: 1140.0'	
DISTRICT: CROSS CREEK			COUNTY: BROOKE			QUADRANGLE: STEUBENVILLE EAST, OH	
SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR			COUNTY: BROOKE			ACREAGE: ±97.50	
OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR			COUNTY: BROOKE			ACREAGE: ±97.50	
DRILL	DRILL DEEPER	REDRILL	FRACTURE OR STIMULATE	PLUG OFF OLD FORMATION	PERFORATE NEW FORMATION		
CONVERT	PLUG & ABANDON		CLEAN OUT & REPLUG	OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED			
TARGET FORMATION: MARCELLUS			ESTIMATED DEPTH: 5,717' TVD 18,617' TMD				

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

<b>LEGEND:</b>	<b>REVISIONS:</b>	<b>DATE:</b> 04-07-2021
<ul style="list-style-type: none"> <li>EXISTING BOTTOM HOLE</li> <li>EXISTING / PRODUCING WELLHEAD</li> <li>EXISTING LANDING POINT LOCATION</li> <li>PROPOSED SURFACE HOLE / BOTTOM HOLE</li> <li>PROPOSED LANDING POINT LOCATION</li> <li>ACCESS ROAD</li> <li>PUBLIC ROAD</li> <li>FLOOD PLAIN</li> <li>LEASE BOUNDARY</li> <li>ASDRILLED PATH</li> <li>PROPOSED PATH</li> </ul>		API NO: 47-009-00304 DRAWN BY: R. GRIMES SCALE: 1" = 3000' DRAWING NO: 2019-0789 WELL LOCATION PLAT



INSET A  
N.T.S.



INSET B  
N.T.S.

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION (S/R)	04-CC16-0007.0001
TRACT	SURFACE OWNER	TAX PARCEL
2	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISION OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION	04-CC16-0008.0001
3	THE PALFALVY IRREVOCABLE TRUST (DENNIS PALFALVY, III)	04-CC16-0005.0000
4	RONALD ALLEN REED	04-CC16-0004.0000
5	PAUL MAROSI	04-CC16-0001.0000
6	LAURA J. & STUART STEUDEBAKER	04-C150-0030.0000
7	DAVID L. & CHERYL D. MILL	04-C11S-0058.0000
8	WALTER & MARJORIE JESKIEWICZ	04-C150-0016.0000
9	ROBERT W. HARBIN	04-C11S-0051.0000
10	PATRICIA I. GOLDSMITH	04-C11S-0052.0000
11	NICOLE E. LONG	04-C11S-0053.0000
12	JASON M. & JENNIFER D. KAZMIRSKI (SURVIVOR)	04-C11S-0054.0000
13	WRIGHT FAMILY TRUST 12/10/13 (DOUG & PENNY WRIGHT TRUSTEES)	04-C11S-0055.0000
14	DENNIS CALVIN GOOCH	04-C11S-0085.0000
15	FREDERICK E. WELSHANS	04-C11S-0086.0000
16	ANGELA C. CALVARESE	04-C11S-0087.0000
17	ROBERT B. & BETTY EILEEN WYKE	04-C11S-0088.0000
18	DAVID P. MELLISH	04-C11M-0035.0000
19	DAVID LANCASTER	04-C11M-0032.0000
20	CHAD A. & CHRISTINA M. RICCELLI (L/E: ROSE ANN RICCELLI)	04-C11M-0031.0000
21	ST. JOHN'S CEMETERY ASSOCIATION	04-C11M-0039.0000
22	ST. JOHN'S EPISCOPAL CHURCH	04-C11M-0003.0000
23	MARK JR. & MARY SECRIST (SURVIVOR)	04-C11M-0001.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0006.0000
B	LENORA J. RINEHART	04-CC15-0074.0000
C	LARRY E. REED	04-CC15-0068.0001
D	REED GEHLING FAMILY TRUST, DATED 10/17/2008	04-CC16-0032.0000
E	GORDON KIGER	04-C15H-0013.0000
F	FRANK & CYNTHIA PAESANO	04-C15H-0014.0000
G	MIKE E. & MARY E. BAILEY	04-C15H-0015.0000
H	DALE W. GAYNOR, JR.	04-C15H-0016.0000
I	DELONG FAMILY KEYSTONE TRUST (VAL JEAN DELONG, TRUSTEE)	04-C15D-0040.0000
J	GLENN THOMPSON	04-C15D-0037.0000
K	JOSEPH A. BIRMINGHAM, JR.	04-C15D-0030.0002
L	CHARLES L. & CYNTHIA WILLIAMSON	04-C15D-0031.0000
M	DOUGLAS SWAIN	04-C15D-0030.0003
N	SHAFFER FAMILY IRREVOCABLE TRUST (INCOME ONLY TRUST)	04-C15D-0027.0000
O	TROY LUCAS	04-C15D-0025.0000
P	TROY LUCAS	04-C15D-0022.0000
Q	CHRISTOPHER E. SMITH	04-C15D-0020.0000
R	JESSE J. BURDINE	04-C15D-0019.0000
S	ROBERTA L. ROGOWSKI (REVOCABLE TRUST)	04-C15D-0014.0000
T	WALTER & MARJORIE JESKIEWICZ	04-C15D-0015.0000
U	DAVID L. & KAREN K. DULANEY (IRREVOCABLE TRUST)	04-C15D-0017.0000
V	DAMON R. MCCORD	04-C15D-0045.0000
W	WILLARD E. & NORMA D. SCOTT	04-C11S-0049.0000
X	JAMES E. & JOYCE M. CRAFT	04-C11S-0048.0000
Y	MICHAEL F. & PATRICIA BRADLEY	04-C11S-0047.0000
Z	JAMES A. CLARK	04-C11S-0056.0000
AA	ROBERT A. WYATT	04-C11S-0057.0000
AB	JEFFREY S. DULANEY	04-C11S-0046.0000
AC	HELEN T. CARBASHO	04-C11S-0045.0000
AD	ROBERTA L. ROGOWSKI (REVOCABLE TRUST)	04-C11S-0044.0000
AE	WILLIAM C. & BARBARA J. WILHARM (SURVIVOR)	04-C11S-0063.0000
AF	WILLIAM C. & BARBARA J. WILHARM (SURVIVOR)	04-C11S-0062.0000
AG	NEIL C. & LINDA S. STEWART (SURVIVOR)	04-C11S-0061.0000
AH	NEIL C. & LINDA S. STEWART (SURVIVOR)	04-C11S-0060.0000
AI	CHARLES E. & DEBORA HENDERSHOT	04-C11S-0059.0000

08/27/2021

REVISIONS:

COMPANY:

**SWN**  
Production Company, LLC

**SWN** <sup>R-V+</sup><sub>A</sub>  
Production Company™

OPERATOR'S

STATE OF WV DNR A

WELL #:

BRK 5H

DISTRICT:

CROSS CREEK

COUNTY:

BROOKE

STATE:

WV

DATE: 04-07-2021

API NO: 47-009-00304

DRAWN BY: R. GRIMES

SCALE: N/A



DRAWING NO: 2019-0789

WELL LOCATION PLAT

COMPLETION ID 2501163218  
PAD ID 3001156588

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AJ	SHARON K. MICHAELSON	04-C11S-0080.0000
AK	SHARON K. MICHAELSON	04-C11S-0081.0000
AL	ANNA BELLE BRYANT	04-C11S-0082.0000
AM	UNITED PRESBYTERIAN CHURCH	04-C11S-0083.0000
AN	PROPERTY SERVICES LLC	04-C11S-0010.0000
AO	WILLIAM A. & VICKY L. HERCULES (SURVIVOR)	04-C11S-0009.0000
AP	MARY ANN MARTIN	04-C11S-0084.0000
AQ	WILLIAM A. & VICKY L. HERCULES (SURVIVOR)	04-C11S-0008.0000
AR	BEVERLY K. CLIFTON	04-C11S-0007.0000
AS	ANTHONY & DIANE P. PAOLISSO	04-C11S-0006.0000
AT	ANTHONY & DIANE P. PAOLISSO (SURVIVOR)	04-C11S-0005.0001
AU	KEVIN L. & SHARON E. HARMS	04-C11S-0005.0000
AV	HELEN P. SMITH	04-C11S-0004.0000
AW	HELEN P. SMITH	04-C11S-0003.0000
AX	RANDY L. GASTON	04-C11S-0002.0000
AY	DAVID A., RANDY L., LARY J., & DENISE O. GASTON	04-C11M-0037.0000
AZ	RICHARD K. RAINERI	04-C11M-0038.0000
BA	ST. JOHN'S CEMETERY CO.	04-C11S-0001.0000
BB	ST. JOHN'S CEMETERY ASSOCIATION	04-C11M-0039.0000
BC	RICHARD S. & SANDRA BARBER	04-C11M-0040.0000
BD	MARK C. SECRIST JR.	04-C11M-0002.0000
BE	LYNN M. CAREY	04-C11M-0001.0003
BF	MARK C. JR & MARY E. SECRIST (SURVIVOR)	04-C11M-0001.0005
BG	JEFFREY L. & TAMARA L. HAIR	04-C11M-0001.0002
BH	MARK C. & MARY E. SECRIST (JTWS)	04-C11M-0001.0004
BI	ST. JOHN'S CEMETERY ASSOCIATION	04-C11L-0013.0000
BJ	MARIETTA COLLEGE	04-C11L-0014.0000
BK	BRIAN E. & CAITLIN E. SIMMONS	04-C11L-0018.0000
BL	DEBORAH L. KAUL	04-C11L-0019.0000
BM	DEBORAH L. KAUL	04-C11L-0020.0000
BN	JOHN C. & FRANCENE FORTE KAVANAUGH	04-C11L-0021.0000
BO	JOSEPH A. ADAMS JR. & ERIN BILLINGSLEY (SURVIVOR)	04-C11L-0095.0000
BP	SARA R. LANIGAN	04-C11L-0012.0000
BQ	SUSAN GRIFFITH, BETH MCBRIDE, & WYLIE MCBRIDE JR.	04-CC11-0083.0000
BR	LINDA BURDISS	04-CC11-0084.0000
BS	LINDA BURDISS	04-CC11-0085.0000
BT	MARK C. SECRIST JR. & MARY E. SECRIST (SURVIVOR)	04-C11M-0005.0000
BU	TRUSTEES OF THE OLDE ST. JOHN'S EPISCOPAL CHURCH	04-C11M-0005.0003
BV	GERALD E. GOURLEY	04-C11M-0004.0000
BW	BARBARA MCVICKER & MARIA FRANCIS	04-C11M-0027.0000
BX	PAUL MAROSI	04-C11M-0028.0000
BY	PAUL MAROSI	04-C11M-0029.0000
BZ	CHAD A. & CHRISTINA M. RICCELLI (L/E: ROSE ANN RICCELLI)	04-C11M-0030.0000
CA	LAWRENCE V. & LISA L. PERRONE (SURVIVOR)	04-C11M-0033.0000
CB	PETREL IRREVOCABLE TRUST 7/25/13 (NANCY PETREL, TRUSTEE)	04-C11M-0034.0000
CC	DAVID P. MELLISH	04-C11S-0089.0000
CD	ANGELA CASTELLANO CALVARESE	04-C11S-0090.0000
CE	RONALD C. BOTTORF II	04-C11S-0091.0000
CF	RONALD C. BOTTORF II	04-C11S-0092.0000
CG	SHAWN A. DENNIS	04-C12J-0033.0000
CH	TAWNIA R. DENNIS	04-CC12-0062.0000
CI	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0054.0001
CJ	NEIL E. VANCAMP JR. & MICHELLE L. VANCAMP (SURVIVOR)	04-CC16-0028.0000
CK	WILLIAM RICHARD WILLS	04-CC16-0033.0000
CL	LAWRENCE & JILL MAZZELLA	04-CC16-0025.0000
CM	RALPH A. BRADY II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0003.0000
CN	RALPH A. BRADY II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0002.0000
CO	RICHARD B. GASVODA	04-CC16-0001.0001
CP	RICHARD B. GASVODA	04-CC16-0001.0004
CQ	DENNIS MOLNAR SR. & DENNIS MOLNAR JR.	04-CC16-0013.0000
CR	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0012.0000
CS	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0010.0000
CT	TERRY A. DAMI ETAL (L/E: JOSEPH T. & LOIS C DAMI)	04-CC16-0009.0000
CU	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0011.0000
CV	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0023.0001
CW	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0023.0000
CX	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0008.0000
CY	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0046.0000
CZ	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0000
DA	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0001
DB	COLLIERS SPORTSMAN CLUB	04-CC20-0024.0000
DC	COLLIERS SPORTSMAN CLUB	04-CC20-0045.0000
DD	FREDA M. DUNN & ROBERT SAUNDRA (L/E: FREDA DUNN)	04-CC20-0001.0000
DE	DAVID C DAMI	04-CC20-0001.0001

08/27/2021

REVISIONS:	COMPANY: 			
	OPERATOR'S STATE OF WV DNR A		DATE: 04-07-2021	
	WELL #: BRK 5H		API NO: 47-009-00304	
	DISTRICT: CROSS CREEK	COUNTY: BROOKE	STATE: WV	DRAWN BY: R. GRIMES
				SCALE: N/A
				DRAWING NO: 2019-0789
				WELL LOCATION PLAT