

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

RECEIVED
Office of Oil and Gas
FEB 24 2022
WV Department of
Environmental Protection

API 47-009-00286 County BROOKE District BUFFALO
Quad BETHANY, WV & STEUBENVILLE EAST, OH Pad Name ROBERT BONE BRK PAD Field/Pool Name PANHANDLE FIELD WET
Farm name ROBERT BONE Well Number ROBERT BONE BRK 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 4,452,138.51 Easting 533,837.98
Landing Point of Curve Northing 4,452,413.84 Easting 534,174.32
Bottom Hole Northing 4,457,086.85 Easting 532,214.64

Elevation (ft) 1,147.5 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 7/1/2020 Date drilling commenced 7/21/2021 Date drilling ceased 8/7/2021
Date completion activities began 10/10/2021 Date completion activities ceased 12/7/2021
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 345 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 628 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 865 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:
SA 9-23-22
09/09/2022

API 47-009 - 00286

Farm name ROBERT BONE

Well number ROBERT BONE BRK 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	420'	NEW	J-55/54.50#	166.3'	Y, 22 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1,648'	NEW	J-55/36#		Y, 45 BBLS
Intermediate 2	12.25	9.625					
Intermediate 3							
Production	8.75	5.50	23,660'	NEW	P-110HP/20#		Y, 45 BBLS
Tubing		2.875	6,485'	NEW	P-110/6.5#		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	477	15.60	1.20	572.4	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	684	15.60	1.19	813.96	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4,188	15.60	1.30	5,444.4	SURFACE	24
Tubing							

Drillers TD (ft) 23,660' Loggers TD (ft) 23,660'

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

Plug back procedure N/A

Kick off depth (ft) 5,181'

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 _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

API 47- 009 - 00286 Farm name ROBERT BONE Well number ROBERT BONE BRK 5H

PRODUCING FORMATION(S)	DEPTHS		
<u>MARCELLUS</u>	<u>5,822'</u>	<u>TVD</u>	<u>6,265'</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,550 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 2,855 mcfpd Oil 742 bpd NGL _____ bpd Water 1,274 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 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 WELL SERVICES
Address PO BOX 12359 City SPRING State _____ Zip 77391

Please insert additional pages as applicable.

Completed by BOBBY WILLIS Telephone 832-796-2884
Signature  Title SENIOR REGULATORY ANALYST Date 2/23/2022

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

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/11/2021
Job End Date:	11/16/2021
State:	West Virginia
County:	Brooke
API Number:	47-009-00286-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	ROBERT BONE BRK 5
Latitude:	40.21898324
Longitude:	-80.60231092
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,765
Total Base Water Volume (gal):	28,223,284
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	88.82306	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.29340	

			Water	7732-18-5	85.00000	0.29340	
			Water	7732-18-5	85.00000	0.29340	
Tolicide 4Frac	SWN Well Services	Biocide					
				Listed Below			
Ferriplex 80	SWN Well Services	Iron Control					
				Listed Below			
Plexaid 655	SWN Well Services	Scale Inhibitor					
				Listed Below			
HCL	SWN Well Services	Solvent					
				Listed Below			
Sand	SWN Well Services	Proppant					
				Listed Below			
FSTI-CI-02	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
PLEXSLICK 930	SWN Well Services	Friction Reducer					
				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	10.79539	
			Hydrochloric Acid	7647-01-0	15.00000	0.04071	

			Tetrakis	55566-30-8	45.00000	0.00461	
			Sodium Erythorbate	6381-77-7	100.00000	0.00145	
			Quaternary ammonium compounds	68424-85-1	7.50000	0.00077	
			Ethanol	64-17-5	2.50000	0.00026	
			Ethylene glycol	107-21-1	40.00000	0.00017	
			Cinnamaldehyde	104-55-2	10.00000	0.00004	
			N,N-Dimethylformamide	68-12-2	10.00000	0.00004	
			Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	10.00000	0.00004	
			Triethyl phosphate	78-40-0	5.00000	0.00002	
			1-Octanol	111-87-5	5.00000	0.00002	
			2-Butoxyethanol	111-76-2	5.00000	0.00002	
			benzyl chloridequaternized	72480-70-7	5.00000	0.00002	
			1-Decanol	112-30-1	5.00000	0.00002	
			Isopropyl alcohol	67-63-0	5.00000	0.00002	

* 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)

**ROBERT BONE BRK 5H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	10/1/2021	23,550	23,456	36
2	10/11/2021	23,422	23,244	36
3	10/12/2021	23,210	23,032	36
4	10/12/2021	22,999	22,820	36
5	10/13/2021	22,787	22,608	36
6	10/13/2021	22,575	22,397	36
7	10/14/2021	22,363	22,180	60
8	10/15/2021	22,152	21,973	36
9	10/15/2021	21,940	21,761	36
10	10/16/2021	21,728	21,550	36
11	10/16/2021	21,516	21,338	36
12	10/16/2021	21,305	21,126	36
13	10/17/2021	21,093	20,915	36
14	10/17/2021	20,881	20,703	36
15	10/17/2021	20,670	20,491	36
16	10/18/2021	20,458	20,279	36
17	10/18/2021	20,246	20,068	36
18	10/19/2021	20,034	19,856	66
19	10/20/2021	19,823	19,644	36
20	10/20/2021	19,611	19,433	66
21	10/21/2021	19,399	19,221	36
22	10/21/2021	19,188	19,009	36
23	10/21/2021	18,976	18,797	36
24	10/22/2021	18,764	18,586	36
25	10/22/2021	18,552	18,374	36
26	10/23/2021	18,341	18,162	36
27	10/23/2021	18,129	17,950	36
28	10/23/2021	17,917	17,739	36
29	10/23/2021	17,705	17,527	36
30	10/24/2021	17,494	17,315	36
31	10/25/2021	17,282	17,104	36
32	10/25/2021	17,070	16,892	36
33	10/25/2021	16,859	16,680	36
34	10/26/2021	16,647	16,468	36
35	10/26/2021	16,435	16,257	36
36	10/26/2021	16,223	16,045	36
37	10/27/2021	16,012	15,833	36
38	10/27/2021	15,800	15,621	36
39	10/28/2021	15,588	15,410	36
40	10/28/2021	15,376	15,198	36
41	10/29/2021	15,165	14,986	36
42	10/29/2021	14,953	14,775	36
43	10/29/2021	14,741	14,563	36

**ROBERT BONE BRK 5H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	10/30/2021	14,530	14,351	36
45	10/30/2021	14,318	14,139	36
46	10/30/2021	14,106	13,928	36
47	10/31/2021	13,894	13,716	36
48	11/1/2021	13,683	13,504	36
49	11/1/2021	13,471	13,292	36
50	11/2/2021	13,259	13,081	36
51	11/2/2021	13,047	12,869	36
52	11/3/2021	12,836	12,657	36
53	11/3/2021	12,624	12,446	36
54	11/4/2021	12,412	12,234	36
55	11/4/2021	12,201	12,022	36
56	11/5/2021	11,989	11,810	36
57	11/5/2021	11,777	11,599	36
58	11/6/2021	11,565	11,387	36
59	11/6/2021	11,354	11,175	36
60	11/7/2021	11,142	10,964	36
61	11/7/2021	10,930	10,752	36
62	11/7/2021	10,719	10,540	36
63	11/8/2021	10,507	10,328	36
64	11/9/2021	10,295	10,117	36
65	11/9/2021	10,083	9,905	36
66	11/9/2021	9,872	9,693	36
67	11/10/2021	9,660	9,481	36
68	11/10/2021	9,448	9,270	36
69	11/11/2021	9,236	9,058	36
70	11/11/2021	9,025	8,846	36
71	11/12/2021	8,813	8,635	36
72	11/12/2021	8,601	8,423	36
73	11/12/2021	8,390	8,211	36
74	11/13/2021	8,178	7,999	36
75	11/13/2021	7,966	7,788	36
76	11/14/2021	7,754	7,576	36
77	11/14/2021	7,543	7,364	36
78	11/14/2021	7,331	7,152	36
79	11/15/2021	7,119	6,941	36
80	11/15/2021	6,907	6,729	36
81	11/16/2021	6,696	6,517	36

ROBERT BONE BRK 5H
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	10/11/2021	70.6	7,997	8,456	3,203	182,580	6,750	0
2	10/11/2021	74.2	8,266	4,892	3,996	285,220	8,375	0
3	10/12/2021	73.9	8,304	3,358	4,063	346,760	9,951	0
4	10/13/2021	77.7	8,395	5,079	3,989	358,580	9,453	0
5	10/13/2021	84.5	8,923	2,827	4,570	363,220	9,297	0
6	10/13/2021	93.3	8,522	4,623	4,211	361,480	8,696	0
7	10/14/2021	75.4	8,767	5,489	5,069	356,080	12,966	0
8	10/15/2021	94.1	8,461	6,020	3,910	366,160	8,616	0
9	10/15/2021	90.1	8,405	5,414	4,202	362,920	8,518	0
10	10/16/2021	93.5	8,284	5,278	4,178	357,320	8,447	0
11	10/16/2021	69.3	8,863	5,412	4,008	357,200	11,155	0
12	10/17/2021	89.8	8,632	5,611	4,201	365,680	8,502	0
13	10/17/2021	92.3	8,651	5,477	4,089	357,160	8,409	0
14	10/17/2021	96.2	8,229	5,852	4,211	356,120	8,430	0
15	10/18/2021	97.7	8,341	5,560	4,173	359,440	8,679	0
16	10/18/2021	64.4	8,770	4,672	4,056	222,660	8,692	0
17	10/19/2021	94.5	8,119	5,501	4,125	362,160	9,557	0
18	10/19/2021	89.6	7,600	5,569	4,158	354,460	12,463	0
19	10/20/2021	98.7	7,903	4,573	4,026	355,740	8,459	0
20	10/20/2021	91.3	7,701	5,326	4,353	358,800	12,672	0
21	10/21/2021	98.4	7,625	4,648	4,795	360,220	8,601	0
22	10/21/2021	87.8	8,672	4,816	4,139	359,230	8,627	0
23	10/22/2021	98.4	7,714	5,406	4,132	360,240	8,921	0
24	10/22/2021	98.4	8,176	4,803	3,974	361,840	8,422	0
25	10/22/2021	94.1	7,730	5,604	4,008	357,180	8,125	0
26	10/23/2021	99.1	7,625	3,546	4,862	357,060	8,448	0
27	10/23/2021	97.7	8,302	4,882	4,296	359,800	8,367	0
28	10/23/2021	94.1	7,791	5,542	4,289	362,260	8,239	0
29	10/24/2021	99.2	7,807	3,749	4,591	358,860	8,367	0
30	10/25/2021	98.2	7,552	4,256	4,265	353,300	8,325	0
31	10/25/2021	99.2	7,641	4,781	4,437	364,960	8,106	0
32	10/25/2021	94.6	7,337	5,410	4,250	361,860	8,391	0
33	10/26/2021	98.5	7,488	5,598	4,377	359,890	7,819	0
34	10/26/2021	98.7	7,491	5,032	4,625	359,360	8,023	0
35	10/26/2021	94.3	7,640	5,543	4,301	361,180	8,146	0
36	10/27/2021	99	7,488	5,089	4,178	360,440	8,143	0
37	10/27/2021	99	7,475	4,372	4,324	366,400	8,550	0
38	10/27/2021	92.5	7,237	5,152	4,303	360,640	8,247	0
39	10/28/2021	99.4	7,183	5,187	4,325	360,520	8,458	0
40	10/28/2021	84.7	8,144	5,154	3,827	357,500	8,104	0
41	10/29/2021	99	6,971	4,903	4,526	358,820	8,301	0
42	10/29/2021	96.7	7,363	4,487	4,320	359,500	8,017	0
43	10/30/2021	96.6	7,612	5,001	4,032	361,080	7,852	0
44	10/30/2021	94.6	6,948	4,505	4,675	336,680	7,997	0
45	10/30/2021	96	7,034	5,745	4,101	354,900	7,824	0
46	10/31/2021	90.1	7,879	5,516	4,301	356,020	8,054	0
47	10/31/2021	95.5	6,932	5,881	4,024	358,520	7,749	0
48	11/1/2021	94.5	6,893	5,575	4,789	356,120	8,068	0
49	11/2/2021	96.9	7,019	5,504	4,314	355,280	7,725	0
50	11/2/2021	95	6,917	4,332	4,643	364,820	7,988	0
51	11/3/2021	94.5	7,359	5,501	4,104	355,260	7,723	0
52	11/3/2021	94.5	6,634	5,432	4,097	353,580	7,726	0
53	11/4/2021	95.5	6,731	5,436	4,017	360,540	7,656	0

**ROBERT BONE BRK 5H
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	11/4/2021	94.5	6,789	5,253	4,357	356,440	7,738	0
55	11/5/2021	95.6	6,845	5,327	4,306	353,000	7,760	0
56	11/5/2021	95.5	6,862	5,369	4,572	355,900	7,714	0
57	11/6/2021	96.5	6,982	5,405	4,165	357,240	7,695	0
58	11/6/2021	99.9	6,462	4,725	4,411	357,840	7,770	0
59	11/6/2021	95.5	6,800	5,181	4,043	355,660	7,650	0
60	11/7/2021	95	6,715	5,776	4,236	363,400	7,945	0
61	11/7/2021	95.5	6,751	5,465	4,075	361,120	7,503	0
62	11/8/2021	100	6,794	5,699	4,342	361,340	7,640	0
63	11/8/2021	95	6,588	5,641	4,178	358,740	7,557	0
64	11/9/2021	95	6,328	5,148	4,529	360,730	7,762	0
65	11/9/2021	95	6,369	4,543	4,147	358,860	7,689	0
66	11/10/2021	95.1	6,457	5,232	4,162	358,500	7,676	0
67	11/10/2021	99.9	6,445	5,564	4,126	354,800	7,576	0
68	11/10/2021	99.9	6,426	5,741	4,056	357,910	7,751	0
69	11/11/2021	98	6,514	5,090	4,123	353,560	7,569	0
70	11/11/2021	99.9	6,298	5,418	4,062	357,880	7,611	0
71	11/12/2021	99.1	6,088	5,337	4,123	355,040	7,873	0
72	11/12/2021	99	6,125	5,434	4,120	370,420	7,873	0
73	11/13/2021	97.7	6,330	5,041	4,123	352,340	9,967	0
74	11/13/2021	99.9	6,063	5,612	4,025	353,840	7,749	0
75	11/14/2021	99	6,170	5,044	4,167	360,140	7,627	0
76	11/14/2021	99.3	5,892	5,123	4,236	351,560	7,466	0
77	11/14/2021	99.2	5,839	5,259	3,981	353,920	7,612	0
78	11/15/2021	99	6,076	5,469	4,126	352,640	7,650	0
79	11/15/2021	95.7	6,549	5,425	4,023	354,640	7,441	0
80	11/16/2021	99	5,724	4,981	4,016	357,220	7,599	0
81	11/16/2021	99	5,580	5,189	4,212	356,780	7,546	0

Well Name:

Robert Bone BRK 5H

47009002860000

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	345.00	345.00	
Top of Salt Water	628.00	628.00	NA	NA	
Pittsburgh Coal	865.00	865.00	867.50	867.50	
Pottsville (ss)	392.00	392.00	514.00	514.00	
Raven Cliff (ss)	764.00	764.00	935.00	935.00	
Maxton (ss)	1117.00	1117.00	1384.00	1384.00	
Big Injun (ss)	1384.00	1384.00	1573.00	1573.00	
Berea (siltstone)	1888.00	1888.00	5531.00	5307.00	
Rhinestreet (shale)	5531.00	5307.00	5803.00	5545.00	
Cashqua (shale)	5803.00	5545.00	5867.00	5596.00	
Middlesex (shale)	5867.00	5596.00	5949.00	5656.00	
Burket (shale)	5949.00	5656.00	5972.00	5671.00	
Tully (ls)	5972.00	5671.00	6058.00	5727.00	
Mahantango (shale)	6058.00	5727.00	6265.00	5822.00	
Marcellus (shale)	6265.00	5822.00	NA	NA	GAS

JHA SURVEYORS
ENGINEERS
ENVIRONMENTAL
GIS MAPPING

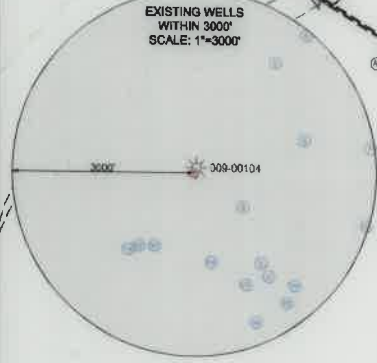
www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-895-6100

(2,000' SCALE) LATITUDE: 40°17'30" BOTTOM HOLE
(2,000' SCALE) LATITUDE: 40°15'00" SURFACE HOLE

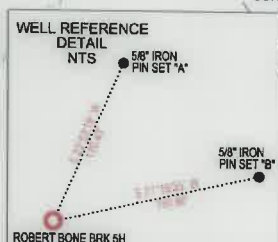
10588'
5310'

NOTES ON SURVEY

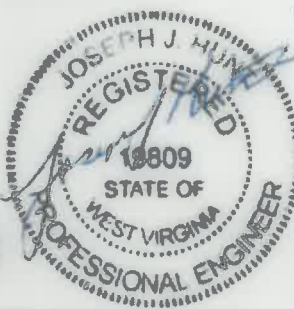
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452138.51 EASTING: 533837.98
LANDING POINT (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452413.84 EASTING: 534174.32
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4457086.85 EASTING: 532214.64
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452138.47 EASTING: 533838.08
LANDING POINT (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452263.71 EASTING: 534224.03
TURNING POINT LOCATION (TPL1) UTM (NAD83, ZONE 17, METERS): NORTHING: 4453839.00 EASTING: 533662.28
TURNING POINT LOCATION (TPL2) UTM (NAD83, ZONE 17, METERS): NORTHING: 4454527.84 EASTING: 533295.41
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4457085.25 EASTING: 532210.13



LINE	BEARING	DISTANCE
L1	S 54°59'07" W	843.16'
L2	N 77°34'33" W	2072.21'



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.E. 19809

<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 SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p>	<p>COMPANY: SWN Production Company, LLC</p> <p>OPERATOR'S WELL #: ROBERT BONE BRK 5H</p> <p>API WELL #: 47 009 00286 STATE COUNTY PERMIT</p>										
	<p>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"/></p> <p>WATERSHED: UPPER OHIO SOUTH</p> <p>DISTRICT: BUFFALO COUNTY: BROOKE</p> <p>SURFACE OWNER: ROBERT BONE</p> <p>OIL & GAS ROYALTY OWNER: ROBERT BONE</p> <p>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"/></p> <p>CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED</p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,866' TVD 23,660' TMD</p>	<p>DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508</p> <p>DATE: 02-16-2022</p>										
<p>WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508</p>	<p>LEGEND:</p> <ul style="list-style-type: none"> ○ EXISTING BOTTOM HOLE ★ EXISTING / PRODUCING WELL-HEAD LPL★ EXISTING LANDING POINT LOCATION ○ PROPOSED SURFACE HOLE / BOTTOM HOLE LPL★ PROPOSED LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊙ EXISTING SPRING — SURVEYED BOUNDARY ===== LEASE BOUNDARY — AS-DRILLED PATH — PROPOSED PATH 	<p>REVISIONS:</p> <table border="1"> <tr> <td> </td> <td>DATE: 02-16-2022</td> </tr> <tr> <td> </td> <td>DRAWN BY: R. GRIMES</td> </tr> <tr> <td> </td> <td>SCALE: 1" = 3000'</td> </tr> <tr> <td> </td> <td>DRAWING NO: 2017-219</td> </tr> <tr> <td> </td> <td>WELL LOCATION PLAT</td> </tr> </table>		DATE: 02-16-2022		DRAWN BY: R. GRIMES		SCALE: 1" = 3000'		DRAWING NO: 2017-219		WELL LOCATION PLAT
	DATE: 02-16-2022											
	DRAWN BY: R. GRIMES											
	SCALE: 1" = 3000'											
	DRAWING NO: 2017-219											
	WELL LOCATION PLAT											

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	ROBERT O. BONE (S/R)	03-837-081.0
TRACT SURFACE OWNER TAX PARCEL		
2	WILLIAM E. & HAZEL E. JOHNSTON	03-837-050.0
3	MARK A. CHRISTMAN	03-837-045.0
4	JAMIE L. OHLER	03-837-043.0
5	KEVIN R. & SANDRA A. COLLINS	03-832-130.0
6	REBECCA L. UHLLY	03-832-139.0
7	JOSEPH P. LIZON III & ERIN RECECCA NIXON	03-832-192.0
8	JOSEPH P. LIZON III & ERIN RECECCA NIXON	03-832-192.1
9	BENITA HOITT, JAMES R. JOHNSON JR., LURA M. JOHNSON(F.K.A. LURA M. HOITT), JEANETTA WELLMAN, KENT WELLMAN, RANDY WELLMAN, & CHARLES LANE KILDOW	03-832-194.0
10	JAMES J. ALLEY	03-832-191.0
11	DAVID MCGOWAN	03-832-190.0
12	ROBERT G. TREADWAY	03-832-188.0
13	SCHIAPPA & COMPANY, INC	03-832-009.0
14	SCHIAPPA & COMPANY, INC	03-832-010.0
15	ROBIE & GERTRUDE LOUISE MCSHANE	03-832-029.0
16	NORMA JEAN LILLY	03-827-017.0
17	LINDA COEN	03-832-025.0
18	HFS LIMITED LIABILITY COMPANY	03-827-012.0
19	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	03-827-004.0
20	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	STATE ROUTE 2
21	HFS LIMITED LIABILITY COMPANY	03-827-012.0
22	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	03-827-011.0
23	CAMPBELL TRANSPORTATION COMPANY	03-827-010.0
24	STATE OF WEST VIRGINIA	OHIO RIVER

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	BENJAMION M. MOSA & CHRISTINE L. HEISE (SURVIVOR)	03-837-074.0
B	BENJAMION M. MOSA & CHRISTINE L. HEISE (SURVIVOR)	03-837-079.0
C	TERRENCE & SUSAN BONE	03-837-080.0
D	BRIAN K. & GINA M. HANEY (SURVIVOR)	03-837-077.0
E	VEMURI HOME AND GARDENS LLC	03-837-082.0
F	DEBRA CYPHERT, MATTHEW H. FAIR, SUSAN S. FAIR, RICHARD HENTORN	03-837-088.0
G	DEBRA CYPHERT, MATTHEW H. FAIR, SUSAN S. FAIR, RICHARD HENTORN	03-837-091.0
H	SCHIAPPA AND COMPANY INC.	03-837-023.0
J	SCHIAPPA AND COMPANY INC.	03-837-022.0
J	KEVIN D. & BRIDGET KOSUT (SURVIVOR)	03-837-042.0
K	CITY OF WELLSBURG COMBINED WATER AND SEWAGE	03-837-140.2
L	CITY OF WELLSBURG COMBINED WATER AND SEWAGE	03-832-192.2
M	EDWARD & SUSAN ZATTA	03-832-140.0
N	ROBERT G. TREDWAY JR	03-832-189.0
O	KAREN L. REINACHER	03-832-187.0
P	CHARLES MICHAEL & BARBARA JEAN TREDWAY	03-832-186.0
Q	JOYCE BRADY, BRIAN JOHNSTON, DANIEL JOHNSTON, KENNETH JOHNSTON, RALPH JOHNSTON, ROBERT JOHNSTON	03-832-189.0
R	MASLO FARMS LLC, A PENNSYLVANIA LLC	03-832-019.0
S	JOSEPH, DAVID, LAWRENCE, & GEORGE VIDERMAN, ETAL	03-832-013.0
T	HAMILTON PENNY	03-832-011.0
U	TONY J. CASTILLO & RICHARD R. OSTRANDER	03-832-027.0
V	TONY J. CASTILLO & RICHARD R. OSTRANDER	03-832-028.0
W	JAMES SCOTT GEAR	03-832-026.0
X	WILLIAM & CAROLYN WALNOHA (SURVIVOR)	03-832-014.0
Y	JOHN PORTER & BRIGETTE ROGERS (SURVIVOR)	03-832-015.0
Z	DOROTHY L. STEVENS	03-832-016.0
AA	RUTH BERNADINE HART	03-832-022.1
AB	WILLIAM RUSSELL WALNOHA, RUTH HART, & GEORGE WALNOHA	03-832-022.0
AC	WILLIAM RUSSELL WALNOHA	03-832-022.2
AD	HFS LIMITED LIABILITY COMPANY	03-832-023.0
AE	HFS LIMITED LIABILITY COMPANY	03-832-024.0
AF	COSS ROAD FARM LLC	03-831-114.0
AG	HFS LIMITED LIABILITY COMPANY	03-831-001.0
AH	CAMPBELL TRANSPORTATION COMPANY INC	03-827-003.0
AI	SMITH REAL ESTATE, LLC	03-827-007.0
AJ	CAMPBELL TRANSPORTATION COMPANY INC	03-827-008.0
AK	GREG PROVENZANO	03-827-009.0
AL	SMITH REAL ESTATE, LLC	03-827-006.0
AM	SMITH REAL ESTATE, LLC	03-827-005.0
AN	BROOKE COUNTY BOARD OF EDUCATION	03-827K-212.0
AO	ABANDON RAILWAY, SOUTH OF BUFFALO CREEK	03-827K-188.0
AP	JOSEPH K. & DIANA R. MENDEL (SURVIVOR)	03-827K-186.0

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AQ	DIANE MENDEL	03-827-013.0
AR	DANIEL P. & DARLA ANN LOMBARDI (SURVIVOR)	03-827-016.0
AS	DANIEL P. LOMBARDI	03-827K-211.0
AT	FRANCIS FORSYTHE, ALLEN LEE FORSYTHE, PAUL DAVID FORSYTHE	03-827K-210.0
AU	ROBERT C. III & RONICA L. CRISS (SURVIVOR)	03-827K-206.0
AV	ROBERT C. III & RONICA L. CRISS (SURVIVOR)	03-827K-205.0
AW	RANDY M. & BRENDA WILLIAMS	03-827K-204.0
AX	RANDY M. & BRENDA WILLIAMS	03-827K-203.0
AY	RANY M. & BRENDA WILLIAMS (SURVIVOR)	03-827K-202.0
AZ	JOHN J. SR, FRISCO, & JOSEPHINE (WANYSZN	03-827K-189.0
BA	ROBIE & GERTRUDE LOUISE MCSHANE	03-827P-030.0
BB	WILLIAM R., CAROLYN S., & JESSICA WALNOHA (SURVIVOR)	03-832-007.0
BC	DAVID B. JONES	03-832-008.0
BD	JEANNE L. & MELANIE JEANNE LUNSFORD	03-832-072.0
BE	WILLIAM WHEAT & CARRIE HIGGS	03-832-071.0
BF	WILLIAM WHEAT & CARRIE HIGGS	03-832-070.0
BG	PATRICIA PREMESA GLORIA SAUVAGEOT	03-832-069.0
BH	JAY D. & KARN SUE RECK	03-832-068.0
BI	JAY D. & KARN SUE RECK	03-832-067.0
BJ	JAY D. & KARN SUE RECK	03-832G-067.1
BK	HERBERT MCGOWAN	03-832G-067.0
BL	VEMURI HOME & GARDEN LLC	03-832G-001.0
BM	DIXIE LEE OHLER	03-832G-002.0
BN	KAY ELLIOTT	03-832G-003.0
BO	KAY ELLIOTT	03-832G-004.0
BP	LARRY M. & DEBORAH R. REED	03-832G-005.0
BQ	LARRY M. & DEBORAH R REED (SURVIVOR)	03-832G-006.0
BR	ROBERT F. & ANNA OHLER	03-832G-007.0
BS	JOHN H. FOX	03-832G-008.0
BT	JAMES E. & ANNETTE M. BEST	03-832G-009.0
BU	JAMES E. & ANNETTE M. BEST	03-832G-010.0
BV	MATTHEW PATRICK TOMSHACK	03-832G-011.0
BW	MATTHEW PATRICK TOMSHACK	03-832-088.0
BX	SUSAN A. FODOR	03-832-089.0
BY	MICHAEL & DELLA SEREVICZ	03-832-090.0
BZ	SAMUEL HERVEY HUBBARD	03-832-096.0
CA	PATRICIA WILLIAMS	03-832-134.0
CB	PATRICIA WILLIAMS	03-832-198.0
CC	STEVEN & HEIDI SARACCO	03-832-197.0
CD	WESLEY M. RINE	03-832-196.0
CE	WESLEY M. RINE	03-832-195.0
CF	CHARLES W. & TAMMY S. WAGNER (SURVIVOR)	03-832-193.0
CG	DAVID L. & JULIE A. HALL	03-832-136.0
CH	DAVID L. & JULIE A. HALL	03-832-137.0
CI	DAVID L. & JULIE A. HALL	03-832-138.0
CJ	KEVIN R. & SANDRA A. COLLINS	03-832-130.1
CK	DAVID L. & JULIE A. HALL	03-832-137.1
CL	HAMMOND PUBLIC SERVICE DISTRICT	03-832-135.0
CM	BERNARD L. JR & DONNA J. MILLER	03-832-132.0
CN	BENARD L. MILLER JR	03-832-131.0
CO	JOSEPH C. & PENNY J. MORRIS	03-832-129.0
CP	VINCENT & PHILLIP MAZZELLA	03-832-128.0
CQ	VINCENT & PHILLIP MAZZELLA	03-837-046.0
CR	DONNA A. MAZZELLA	03-837-047.0
CS	SHELBY L. CARRELL, BONNIE LEE LUKACENA, EDWARD O'DYER, PAIGE ELIZABETH ROLLINS, JULIE SHEY SCHUETZNER, SHANON SCHUETZNER, SHAYNE SCHUETZNER, CHERI A. SHARPE	03-837-048.0
CT	DWARKA NATH VEMURI DBA AMERICAN HEART ASSOCIATES	03-837-047.0
CU	WILLIAM E. & HAZEL M. JOHNSTON JTWROS	03-837-053.1
CV	BUFFALO CREEK CAMP	03-837-51.0
CW	MARLIN G. SR & JOY CRAWFORD (SURVIVOR)	03-837-055.0
CX	JOHN E. & SHERRIL J. RIPLEY	03-837-062.0
CY	JOSEPH K. & GLORIA JEAN BOWMAN	03-837-070.0
CZ	JOSEPH K. & GLORIA JEAN BOWMAN	03-837-067.1
DA	WILLIAM E. & HAZEL E. JOHNSTON JTWROS, CAROLE & WOODROW W. SILVER JR (L/E), PAULA K, SILVER (L/E)	03-837-047.0
DB	WILLIAM E. & HAZEL E. BERTY JOHNSTON JTWROS	03-837-074.1
DC	JAMES L. & SONDR A. ELLIOT	03-837-071.0
DD	ROBIE & GERTRUDE LOUISE MCSHANE	03-832-030.0
DE	HAMMOND PUBLIC SERVICE DISTRICT	03-832-194.1
DF	HAMMOND PUBLIC SERVICE DISTRICT	03-837-045.1

REVISIONS:

COMPANY:

SWN
Production Company, LLC

swr
Production Company™

09/09/2022

OPERATOR'S

ROBERT BONE

DATE: 02-16-2022

WELL #:

BRK 5H

DRAWN BY: R. GRIMES

DISTRICT:

BUFFALO

COUNTY:

BROOKE

STATE:

WV

SCALE: N/A

DRAWING NO: 2017-219

WELL LOCATION PLAT