

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

API 47 - 009 - 00303 County BROOKE District BUFFALO  
Quad TILTONSVILLE, OH/BETHANY, WB Pad Name EDWARD ZATTA BRK PAD Field/Pool Name PANHANDLE FIELD WET  
Farm name COSS ROAD FARM, LLC Well Number EDWARD ZATTA BRK 6H  
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 4,455,169.56 Easting 531,254.97  
Landing Point of Curve Northing 4,455,799.72 Easting 530,737.57  
Bottom Hole Northing 4,452,902.07 Easting 532,059.01

Elevation (ft) 1218' 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 2/25/2020 Date drilling commenced 9/29/2020 Date drilling ceased 10/11/2020  
Date completion activities began 1/08/2021 Date completion activities ceased 1/28/2021  
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 276 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 565 Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 244 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
Bany Hill  
Department of Environmental Protection  
08/27/2021  
3-11-21

API 47-009 - 00303 Farm name COSS ROAD FARM, LLC Well number EDWARD ZATTA BRK 6H

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	350'	NEW	J-55/54.50#	221'; 179'	Y, 7 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1,423'	NEW	J-55/36#		Y, 35 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	18,031'	NEW	P-110/20#		Y, 72 BBLS
Tubing		2.375	7,493'	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 <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	318	15.60	1.21	384.78	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	627	15.60	1.19	746.13	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,410	15.60	1.19	4,057.9	SURFACE	24
Tubing							

Drillers TD (ft) 18,031 Loggers TD (ft) 18,031  
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5,918'

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 \_\_\_\_\_

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
WV Department of Environmental Protection  
2/27/2021



API 47- 009 - 00303 Farm name COSS ROAD FARM, LLC Well number EDWARD ZATTA BRK 6H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>5,654'</u>	<u>TVD</u>	<u>7,200'</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 2150 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 3,091 mcfpd Oil 950 bpd NGL \_\_\_\_\_ bpd Water 1,694 bpd  
 GAS MEASURED BY  Estimated  Orifice  Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	
	<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 GROGRANS MILL ROAD City THE WOODLANDS State TX Zip 77380

Cementing Company BJ SERVICES  
 Address 11211 FM 2920 City TOMBALL State TX Zip 77377

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 [Signature] Title SENIOR REGULATORY ANALYST Date 4/7/2021

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

RECEIVED  
 Office of Oil and Gas  
 APR 8 2021  
 WV Department of  
 Environmental Protection  
 04/27/2021



Well Name: Edward Zatta BRK 6H

47009003030000

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	276.00	276.00	
Top of Salt Water	565.00	565.00	NA	NA	
Pittsburgh Coal	244.00	244.00	409.00	409.00	
Pottsville (ss)	409.00	409.00	729.00	729.00	
Raven Cliff (ss)	729.00	729.00	1359.00	1359.00	
Big Injun (ss)	1359.00	1359.00	1516.00	1516.00	
Berea (siltstone)	1917.00	1873.00	6546.00	5176.00	
Rhinestreet (shale)	6546.00	5176.00	6797.00	5407.00	
Cashaqua (shale)	6797.00	5407.00	6859.00	5458.00	
Middlesex (shale)	6859.00	5458.00	6942.00	5519.00	
Burket (shale)	6942.00	5519.00	6964.00	5534.00	
Tully (ls)	6964.00	5534.00	7043.00	5583.00	
Mahantango (shale)	7043.00	5583.00	7200.00	5654.00	
Marcellus (shale)	7200.00	5654.00	NA	NA	GAS

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
WV Department of  
Environmental Protection

# NO DISCHARGE

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Discharge Monitoring Report  
Oil and Gas General Permit

Company Name: SWN PRODUCTION COMPANY, LLC  
API No: 47-009-00303 County: BROOKE  
District: BUFFALO Well No: EDWARD ZATTA BRK 6H  
Farm Name: COSS ROAD FARM, LLC

Discharge Date/s From:(MMDDYY) \_\_\_\_\_ To: (MMDDYY) \_\_\_\_\_  
Discharge Times. From: \_\_\_\_\_ To: \_\_\_\_\_

Total Volume to be Disposed from this facility (gallons): \_\_\_\_\_

Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: \_\_\_\_\_ (Include a topographical map of the Area.)
- (2) UIC: \_\_\_\_\_ Permit No. \_\_\_\_\_
- (3) Offsite Disposal: \_\_\_\_\_ Site Location: \_\_\_\_\_
- (4) Reuse: \_\_\_\_\_ Alternate Permit Number: \_\_\_\_\_
- (5) Centralized Facility: \_\_\_\_\_ Permit No. \_\_\_\_\_
- (6) Other method: \_\_\_\_\_ (Include an explanation)

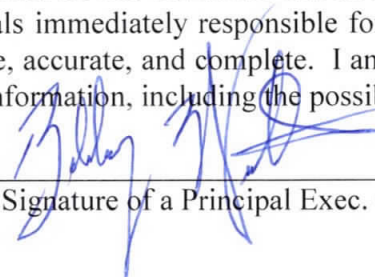
Follow Instructions below to determine your treatment category:

Optional Pretreatment test: \_\_\_\_\_ Cl- mg/l \_\_\_\_\_ DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N) \_\_\_\_\_ If yes, who? \_\_\_\_\_ and place a four (4) on line 7. If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) \_\_\_\_\_ If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) \_\_\_\_\_ If yes, go to line 4. If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) \_\_\_\_\_ If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) \_\_\_\_\_ If yes, go to line 6. If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l?(Y/N) \_\_\_\_\_ If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. \_\_\_\_\_ is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: \_\_\_\_\_

Name of Principal Exec. Officer: \_\_\_\_\_  
Title of Officer: \_\_\_\_\_  
Date Completed: \_\_\_\_\_

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

 4/7/2021  
Signature of a Principal Exec. Officer or Authorized agent.

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
WV Department of Environmental Protection  
08/27/2021

Category 1  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	5	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl	5,000	_____	5,000	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\*\*\* Al is only reported if the pH is above 9.0

Category 2  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	10	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_

\*\* Include a description of your aeration technique.

Aeration Code: \_\_\_\_\_

\*\*\* Al is only reported if the pH is above 9.0

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
Department of  
Environmental Protection

Category 3  
Sampling Results

API No : \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	20	_____	N/A	N/A	Days
Fe	6	_____	6	_____	mg/l
D.O.	2.5	_____	2.5	_____	mg/l
Settleable Sol.	0.5	_____	0.5	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
Total Al***		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_

\*\* Include a description of your aeration technique.

Aeration Code: \_\_\_\_\_

\*\*\* Al is only reported if the pH is above 9.0.

Category 4  
Sampling Results

API No: \_\_\_\_\_

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	1	_____	N/A	N/A	Days
Fe	Monitor	_____	Monitor	_____	mg/l
D.O.	Monitor	_____	Monitor	_____	mg/l
Settleable Sol.	Monitor	_____	Monitor	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Activated Carbon (0.175)		_____	N/A	N/A	lb/Bt
Date Site Reclaimed	N/A	N/A			10 days from
Disposal Area		_____	Monitor	_____	Acres

\* Can be 25,000 with inspector's approval,

(Inspector's signature): \_\_\_\_\_

Date: \_\_\_\_\_

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
WV Department of  
Environmental Protection  
08/27/2021



# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/8/2021
Job End Date:	1/23/2021
State:	West Virginia
County:	Brooke
API Number:	47-009-00303-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	EDWARD ZATTA BRK 6H
Latitude:	40.24663910
Longitude:	-80.63252000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,766
Total Base Water Volume (gal):	20,152,519
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
Fresh Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	85.65209	Density = 8.34
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	3.98690	Density = 8.50

RECEIVED  
 Office of Oil and Gas  
 APR 8 2021  
 WV Department of Environmental Protection

Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.41344	
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant					
				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent					
				Listed Below			
FE-2A	Halliburton	Additive					
				Listed Below			
LEGEND(TM) LD-7750W	MultiChem	Scale Control					
				Listed Below			
Sand-Premium White-40/70	Halliburton	Proppant					
				Listed Below			
Excelerate LX-15	Halliburton	Friction Reducer					
				Listed Below			
MC MX 8-4743	MultiChem	Additive					
				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor					

RECEIVED  
 Office of Oil and Gas  
 APR 8 2024  
 W.V. Department of Environmental Protection

				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	9.82591	
			Complex Amine Compound	Proprietary	60.00000	0.03318	
			Hydrochloric acid	7647-01-0	30.00000	0.03302	
			Sodium nitrate	7631-99-4	60.00000	0.02174	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01659	
			Methanol	67-56-1	100.00000	0.00516	
			Surfactant	Proprietary	5.00000	0.00277	
			Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00277	
			Sodium molybdate	10102-40-6	5.00000	0.00181	
			Citric acid	77-92-9	60.00000	0.00176	
			Ethoxylated alcohols	Proprietary	5.00000	0.00056	
			Alkoxyated polyhydric alcohol	Proprietary	1.00000	0.00055	
			Organic chloride compound	Proprietary	1.00000	0.00055	
			Sodium chloride	7647-14-5	5.00000	0.00045	
			Phosphoric Acid Salt	Proprietary	5.00000	0.00041	
			Modified thiourea polymer	Proprietary	30.00000	0.00006	
			Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00006	
			Yeast extract	8013-01-2	0.10000	0.00004	
			Sodium lactate	72-17-3	0.10000	0.00004	
			Sodium acetate	127-09-3	0.10000	0.00004	
			Monopotassium phosphate	7778-77-0	0.10000	0.00004	
			Formaldehyde	50-00-0	0.10000	0.00001	
			Hexadecene	629-73-2	5.00000	0.00001	

RECEIVED  
 Office of Oil and Gas  
 APR 8 2021  
 Environmental Protection  
 W. D. Taylor

			Propargyl alcohol	107-19-7	5.00000	0.00001	
			Acrylamide	79-06-1	0.01000	0.00001	
			Sodium hydroxide	1310-73-2	0.01000	0.00001	
			Organic salt #2	Proprietary	0.01000	0.00001	
			Organic salt #1	Proprietary	0.01000	0.00001	
			Nitrated acetate salt	Proprietary	0.01000	0.00001	
			Sodium glycolate	2836-32-0	0.01000	0.00001	

\* 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)

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
M.D. Department of  
Environmental Protection

Edward Zatta BRK 6H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	12/31/2020	17,965	17,874	36
2	1/9/2021	17,840	17,661	36
3	1/9/2021	17,628	17,449	36
4	1/9/2021	17,416	17,237	36
5	1/10/2021	17,203	17,024	36
6	1/10/2021	16,991	16,809	36
7	1/10/2021	16,779	16,600	36
8	1/11/2021	16,567	16,388	36
9	1/11/2021	16,354	16,176	36
10	1/11/2021	16,142	15,963	36
11	1/11/2021	15,925	15,751	36
12	1/12/2021	15,718	15,539	36
13	1/12/2021	15,506	15,327	36
14	1/12/2021	15,293	15,115	36
15	1/12/2021	15,081	14,902	36
16	1/13/2021	14,869	14,690	36
17	1/13/2021	14,657	14,481	36
18	1/13/2021	14,444	14,266	36
19	1/14/2021	14,232	14,053	36
20	1/14/2021	14,020	13,842	36
21	1/14/2021	13,808	13,634	36
22	1/14/2021	13,596	13,417	36
23	1/15/2021	13,383	13,205	36
24	1/15/2021	13,171	12,992	36
25	1/15/2021	12,959	12,785	36
26	1/15/2021	12,747	12,568	36
27	1/16/2021	12,535	12,356	36
28	1/16/2021	12,322	12,149	36
29	1/16/2021	12,110	11,931	36
30	1/16/2021	11,898	11,719	36
31	1/17/2021	11,686	11,507	36
32	1/17/2021	11,473	11,295	36
33	1/17/2021	11,261	11,082	36
34	1/17/2021	11,049	10,870	36
35	1/18/2021	10,837	10,661	36
36	1/18/2021	10,625	10,446	36
37	1/18/2021	10,412	10,233	36
38	1/19/2021	10,200	10,021	36
39	1/19/2021	9,988	9,809	36
40	1/19/2021	9,776	9,602	36
41	1/19/2021	9,563	9,385	36
42	1/20/2021	9,349	9,172	36
43	1/20/2021	9,139	8,960	36
44	1/21/2021	8,927	8,748	36
45	1/21/2021	8,715	8,540	36
46	1/21/2021	8,502	8,323	36
47	1/21/2021	8,290	8,111	36
48	1/22/2021	8,078	7,899	36
49	1/22/2021	7,866	7,687	36
50	1/22/2021	7,653	7,475	36
51	1/23/2021	7,441	7,262	36

RECEIVED  
Office of Oil and Gas  
APR 8 2021  
WV Department of  
Environmental Protection

08/27/2021

Edward Zatta BRK 6H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	12/31/2020	17,965	17,874	36
2	1/9/2021	17,840	17,661	36
3	1/9/2021	17,628	17,449	36
4	1/9/2021	17,416	17,237	36
5	1/10/2021	17,203	17,024	36
6	1/10/2021	16,991	16,809	36
7	1/10/2021	16,779	16,600	36
8	1/11/2021	16,567	16,388	36
9	1/11/2021	16,354	16,176	36
10	1/11/2021	16,142	15,963	36
11	1/11/2021	15,925	15,751	36
12	1/12/2021	15,718	15,539	36
13	1/12/2021	15,506	15,327	36
14	1/12/2021	15,293	15,115	36
15	1/12/2021	15,081	14,902	36
16	1/13/2021	14,869	14,690	36
17	1/13/2021	14,657	14,481	36
18	1/13/2021	14,444	14,266	36
19	1/14/2021	14,232	14,053	36
20	1/14/2021	14,020	13,842	36
21	1/14/2021	13,808	13,634	36
22	1/14/2021	13,596	13,417	36
23	1/15/2021	13,383	13,205	36
24	1/15/2021	13,171	12,992	36
25	1/15/2021	12,959	12,785	36
26	1/15/2021	12,747	12,568	36
27	1/16/2021	12,535	12,356	36
28	1/16/2021	12,322	12,149	36
29	1/16/2021	12,110	11,931	36
30	1/16/2021	11,898	11,719	36
31	1/17/2021	11,686	11,507	36
32	1/17/2021	11,473	11,295	36
33	1/17/2021	11,261	11,082	36
34	1/17/2021	11,049	10,870	36
35	1/18/2021	10,837	10,661	36
36	1/18/2021	10,625	10,446	36
37	1/18/2021	10,412	10,233	36
38	1/19/2021	10,200	10,021	36
39	1/19/2021	9,988	9,809	36
40	1/19/2021	9,776	9,602	36
41	1/19/2021	9,563	9,385	36
42	1/20/2021	9,349	9,172	36
43	1/20/2021	9,139	8,960	36
44	1/21/2021	8,927	8,748	36
45	1/21/2021	8,715	8,540	36
46	1/21/2021	8,502	8,323	36
47	1/21/2021	8,290	8,111	36
48	1/22/2021	8,078	7,899	36
49	1/22/2021	7,866	7,687	36
50	1/22/2021	7,653	7,475	36
51	1/23/2021	7,441	7,262	36

RECEIVED  
Office of Oil and Gas  
APR 8 2021

WV Department of  
Environmental Protection

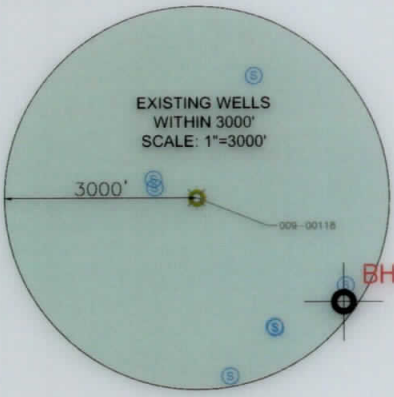
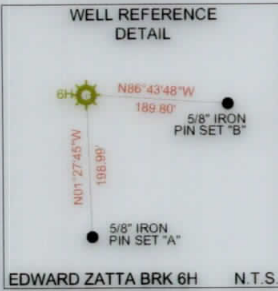
08/27/2021

**Edward Zatta BRK 6H  
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
1	1/9/2021	84.81	8,109	6,715	3,725	205,700	5,739	0
2	1/9/2021	99.44	8,427	5,266	4,341	360,930	10,346	0
3	1/9/2021	93.37	8,205	4,626	4,336	363,550	10,421	0
4	1/10/2021	87.98	8,066	5,492	3,997	364,840	11,169	0
5	1/10/2021	94.8	8,292	4,883	4,130	370,280	10,981	0
6	1/10/2021	97.87	8,172	5,575	3,812	366,870	10,557	0
7	1/11/2021	98.34	8,205	5,631	4,155	364,850	10,201	0
8	1/11/2021	99.74	8,370	4,237	4,168	372,350	9,952	0
9	1/11/2021	99.24	8,420	3,798	3,983	361,980	9,854	0
10	1/11/2021	99.55	8,187	5,456	4,118	365,740	9,954	0
11	1/12/2021	99.1	8,264	5,203	4,111	365,630	10,032	0
12	1/12/2021	93.58	8,024	5,105	4,394	367,880	10,867	0
13	1/12/2021	99.85	8,204	4,214	4,315	369,740	9,480	0
14	1/12/2021	99.55	8,195	5,512	3,834	367,450	9,515	0
15	1/13/2021	99.69	8,093	5,500	4,137	365,521	9,561	0
16	1/13/2021	92.3	7,636	5,312	4,157	364,360	9,637	0
17	1/13/2021	100.03	8,087	3,968	4,137	363,977	9,628	0
18	1/14/2021	99.53	8,087	5,610	4,105	368,710	9,283	0
19	1/14/2021	99.6	8,147	5,403	4,321	362,971	9,366	0
20	1/14/2021	99.9	8,031	5,414	4,163	360,885	9,037	0
21	1/14/2021	100.53	7,928	5,115	3,972	365,140	9,126	0
22	1/14/2021	98.7	7,931	5,471	3,967	365,490	9,366	0
23	1/15/2021	99.71	7,931	5,358	4,111	368,520	9,330	0
24	1/15/2021	93.28	7,604	5,248	3,902	368,556	9,388	0
25	1/15/2021	99.76	7,530	5,232	4,154	364,300	8,949	0
26	1/15/2021	99.63	7,315	5,346	4,025	366,670	9,247	0
27	1/16/2021	99.82	7,226	5,407	4,080	365,140	9,293	0
28	1/16/2021	100.26	7,522	5,102	3,676	363,388	9,024	0
29	1/16/2021	96.95	7,387	5,495	3,996	361,690	9,011	0
30	1/17/2021	98.87	7,314	5,262	4,173	362,970	9,220	0
31	1/17/2021	95.91	7,758	5,326	3,877	369,077	9,046	0
32	1/17/2021	99.3	7,097	5,193	4,199	365,560	8,895	0
33	1/17/2021	99.82	7,273	5,225	4,211	366,050	9,158	0
34	1/18/2021	99.77	7,103	5,464	3,836	367,740	9,175	0
35	1/18/2021	99.78	7,323	5,422	3,695	367,548	9,031	0
36	1/18/2021	100.13	7,189	5,527	4,079	366,323	9,013	0
37	1/18/2021	99.8	7,352	5,177	4,077	361,640	9,205	0
38	1/19/2021	100.26	7,131	5,009	4,105	359,310	9,115	0
39	1/19/2021	100.23	6,705	4,297	3,156	360,824	9,247	0
40	1/19/2021	88.24	7,590	4,783	3,607	358,410	9,381	0
41	1/20/2021	99.78	7,519	4,444	3,996	360,840	9,832	0
42	1/20/2021	87.2	7,487	4,909	4,012	362,531	10,209	0
43	1/21/2021	99.05	7,370	4,772	3,801	365,930	10,380	0
44	1/21/2021	99.45	7,247	4,941	3,823	361,840	9,318	0
45	1/21/2021	100.12	7,087	4,983	4,110	362,143	9,017	0
46	1/21/2021	98.44	6,496	4,755	3,918	366,187	8,985	0
47	1/22/2021	100.1	6,358	4,815	4,044	363,610	9,186	0
48	1/22/2021	99.8	6,275	5,020	4,092	360,651	9,060	0
49	1/22/2021	99.82	6,218	4,569	3,917	360,899	8,937	0
50	1/22/2021	100.51	6,135	4,569	3,703	367,260	9,095	0
51	1/23/2021	100.47	5,948	4,569	3,929	358,450	9,184	0

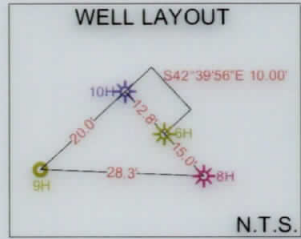
RECEIVED  
Office of Oil and Gas  
APR 8 2021  
08/27/2021  
WV Department of Environmental Protection

**JHA** Companies  
**ENGINEERS SURVEYORS ENVIRONMENTAL GIS MAPPING**  
 www.jhacompanies.com  
 68011 Vineyard Road  
 St. Clairsville, Ohio 43950  
 740-695-6100

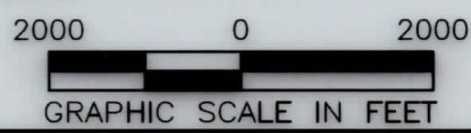


LINE	BEARING	DISTANCE
L1	S66°10'51"E	1346.25'
L2	S13°58'13"W	840.10'

<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4455169.56 EASTING: 531254.97
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4455799.72 EASTING: 530737.57
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4452902.07 EASTING: 532059.01
<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4455170.18 EASTING: 531254.40
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4455863.71 EASTING: 530710.54
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4452896.06 EASTING: 532063.24



- 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

(+) 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: SURVEY GRADE GPS (NAVD 88, US FT)	COMPANY: SWN Production Company, LLC EDWARD ZATTA BRK OPERATOR'S WELL #: 6H  API WELL #: 47 STATE 009 COUNTY 0303 PERMIT
	WELL TYPE: OIL WASTE DISPOSAL PRODUCTION X DEEP GAS X LIQUID INJECTION STORAGE SHALLOW X WATERSHED: UPPER OHIO SOUTH DISTRICT: BUFFALO COUNTY: BROOKE SURFACE OWNER: COSS ROAD FARM, LLC OIL & GAS ROYALTY OWNER: MY THREE SONS HOLDINGS, LP DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE X (SPECIFY) AS-DRILLED TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,866' TVD 18,031' TMD	ELEVATION: 1218.0' QUADRANGLE: TILTONSVILLE, OH/BETHANY, WV ACREAGE: ±183.28 ACREAGE: ±183.28

**LEGEND:**

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

**REVISIONS:**

NO.	DESCRIPTION	DATE



WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	COSS ROAD FARM, LLC (S) MY THREE SONS HOLDINGS, LP (R)	03-831-114.0
TRACT	SURFACE OWNER	TAX PARCEL
2	COSS ROAD FARM, LLC	03-831-119.0
3	HFS LIMITED LIABILITY COMPANY	03-831-01.0
4	STATE OF WEST VIRGINIA	STATE ROUTE 2
5	WEST VIRGINIA DEPARTMENT OF HIGHWAYS	03-827-11.0
6	HFS LIMITED LIABILITY COMPANY	03-831-02.0
7	STATE OF WEST VIRGINIA	OHIO RIVER
8	HFS LIMITED LIABILITY COMPANY	03-831-04.0
9	COSS ROAD FARM, LLC	03-831-118.0
10	ROBERT J., SR. & MARGARET E. STEWART	03-831-132.0
11	ROBERT J., SR. & MARGARET E. STEWART	03-831-133.0
12	RONALD C. PARKS	03-831-134.0
13	CURTIS R. & DONNA J. BARONIO	03-831-135.0
14	JERRY L. & ANGEL L. MCCLELLAND	03-831-136.0
15	RODGER & CONNIE SUMMERS	03-831-137.0
16	THOMAS & PAULINE SALEM	03-831-138.0
17	KEITH R. FRANCIS	03-831-139.0
18	RANDOLPH L. & TAMMY R. CLARK	03-831-140.0
19	RANDOLPH & TAMMY CLARK	03-831-141.0
20	HAROLD STARKEY	03-831-104.0
21	CHERYLL L. STEMPL	03-831-103.0
22	STEVEN THOMAS	03-831-97.0
23	LONNIE & CARRIE R. BLAKE	03-831-92.0
24	LONNIE BLAKE	03-831-89.0
25	MARILYN LEE BROWN	03-832-152.0
26	MARILYN LEE BROWN	03-836-39.0
27	KEVIN S. WEEKLEY	03-832-151.0
28	JOHN M. & ROBIN L. SNYDER	03-837-08.0
29	CHRISTINE PHILLIPS	03-837-07.0
30	HARLEY J. LEMASTERS	03-837-06.0
31	HARLEY J. LEMASTERS	03-837-21.0

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	MELINDA B. WOOLWINE	03-832-25.0
B	HFS LIMITED LIABILITY COMPANY	03-832-24.0
C	HFS LIMITED LIABILITY COMPANY	03-832-23.0
D	WILLIAM RUSSELL WALNOHA	03-832-22.2
E	GREGORY DEDITCH	03-832-01.0
F	MARY CATHERINE WALNOHA	03-832-18.0
G	ROBERT BLACKBURN & JAMES BLACKBURN	03-832-21.0
H	KEITH R. FRANCIS	03-831-113.0
I	JOSEPH C. & KRISTIE J. GASVODA	03-831-112.0
J	JOSEPH C. & KRISTIE J. GASVODA	03-831-111.0
K	MASLO FARMS, LLC (A PENNSYLVANIA LLC)	03-832-20.0
L	STEVEN S. IVERSON & DEBRA L. IVERSON	03-831-101.0
M	STEVEN S. IVERSON & DEBRA L. IVERSON	03-831-102.1
N	CHERYLL L. STEMPL	03-831-102.0
O	STEVEN L. THOMAS	03-831-98.0
P	JOHN H. BROWN & KIMBERLY A. NEELEY	03-832-154.0
Q	KEVIN R. & SHIRLEY W. FIBER	03-831-93.0
R	KEVIN R. & SHIRLEY W. FIBER	03-832-153.0
S	NILA BOYD, CLINTON MCCORD, JOHN MCCORD, REBA MCCORD & CAROLYN JONES	03-832-146.0
T	HARLEY J. LEMASTERS	03-832-149.0
U	HARLEY J. LEMASTERS	03-832-150.0
V	MICHAELA TAYLOR	03-837-02.0
W	HARLEY J. LEMASTERS	03-837-01.0
X	LAWRENCE D., JR. & TAMMY LYNN CAMPBELL (L/E: LAWRENCE & JUDY CAMPBELL)	03-837-03.0
Y	HARLEY J. & LARRY W. LEMASTERS	03-837-04.0
Z	EDWARD MICHAEL EVANKO, SR.	03-837-05.0
AA	HARLEY J. LEMASTERS	03-837-20.0
AB	MICHAEL MCCLOUD	03-837-18.0
AC	MICHAEL A. MCCLOUD	03-837-17.0
AD	THOMAS & CAROLYN CARBASHO	03-837-16.0
AE	SCHIAPPA AND COMPANY, INC	03-837-22.0
AF	JAMES W. & LISA GIBSON	03-837-28.0
AG	AARON J. & KATE M. GIBSON	03-837-28.1
AH	ROBERT W. & BRENDA L. FONNER	03-837-27.0
AI	ROBERT W. & BRENDA L. FONNER	03-837-26.0
AJ	DEAN S. & KELLI M. MILLER	03-837-25.0
AK	KEVIN N. HUFF (T.O.D. JOHN W. & HELEN L. HUFF)	03-837-24.0
AL	KEVIN N. HUFF	03-836-36.0
AM	CARLOS J. & BILLIE D. O'BRIEN	03-836-28.0
AN	CARLOS J. & BILLIE D. O'BRIEN	03-836-25.0
AO	KENNETH C. LUCAS	03-836-24.0
AP	ROBERT D. & CAROLYN HILDEBRAND	03-831-86.0
AQ	JAMES J. & GERALDINE LONG	03-831-87.0
AR	PERCY E. & DOROTHY J. HUGGINS	03-831-88.0
AS	MICHAEL S. WALNOHA	03-831-78.0
AT	LONNIE V. BLAKE	03-831-90.0
AU	LONNIE BLAKE	03-831-91.0
AV	LONNIE V. BLAKE	03-831-94.0
AW	ARCHE VERNON LUDWIG	03-831-96.0
AX	ARCHE VERNON LUDWIG	03-831-95.0
AY	CORY LARKINS	03-831-105.0
AZ	PAULA FAYE HANCHER & TIMOTHY NALE	03-831-106.0
BA	TIMOTHY L., SR. & JANET L. NOEL	03-831-107.0
BB	ROGER W. & HEATHER N. DOYLE	03-831-108.0
BC	WILLIAM & BEVERLY LOUGH	03-831-110.0
BD	ANDREW ULLOM & JEFFREY H. LYNN	03-831-142.0
BE	DEBBIE STEWARD	03-831-125.0
BF	HARLEY J. LEMASTERS	03-831-126.0
BG	JAMES W. GRIMM	03-831-127.0
BH	JAMES W. & ROBIN LYNN GRIMM	03-831-128.0
BI	JAMES W. GRIMM	03-831-129.0
BJ	MARION WEEKLY & NANCY GROVES	03-831-130.0
BK	WILLIAM E. TORBETT	03-831-131.0
BL	RAY WALNOHA	03-831-06.0
BM	RAY WALNOHA	03-831-05.0
BN	RAY WALNOHA	03-831-115.0
BO	AUDREY L. HOLDEN	03-831-116.0
BP	BARBARA A. TAYLOR	03-831-117.0
BQ	MATTHEW J. & ELIZABETH PADDEN (AMY M. TOLPS TRUST OF 2013)	03-831-14.0
BR	HFS LIMITED LIABILITY COMPANY	03-831-03.0
BS	CAMPBELL TRANSPORTATION COMPANY, INC	03-827-10.0
BT	HFS LIMITED LIABILITY COMPANY	03-827-12.0
BU	JAMES L. & SONORA K. ELLIOTT	03-831-121.0
BV	EDWARD MACIAK	03-831-120.0

08/27/2021

REVISIONS:	COMPANY: <b>SWN</b> Production Company, LLC		<b>SWN</b> <sup>R+</sup> / <sub>A</sub> <sup>V+</sup> / <sub>+</sub> Production Company™	
	OPERATOR'S: EDWARD ZATTA BRK		DATE: 03-26-2021	
	WELL #: 6H		API NO: 47-009-0303	
	DISTRICT: BUFFALO	COUNTY: BROOKE	DRAWN BY: R. GRIMES	
		STATE: WV	SCALE: N/A	
			DRAWING NO: 2019-0789	
			WELL LOCATION PLAT	