

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

API 47-009-00300 County BROOKE District CROSS CREEK
Quad STEUBENVILLE 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 405H
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 4,463,504.10 Easting 539,498.53
Landing Point of Curve Northing 4,463,758.00 Easting 540,110.54
Bottom Hole Northing 4,467,243.08 Easting 538,507.38

Elevation (ft) 1,139.8' 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 2/7/2020 Date drilling commenced 9/28/2020 Date drilling ceased 10/09/2020
Date completion activities began 1/01/2021 Date completion activities ceased 2/04/2021
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

RECEIVED
Office of Oil and Gas

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

APR 20 2021

Freshwater depth(s) ft 542 Open mine(s) (Y/N) depths N WV Department of Environmental Protection
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:
Bang Stillep
08/27/2021

API 47-009 - 00300 Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well number STATE OF WV DNR A 405H

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	645	NEW	J-55/54.50#	559	Y, 30 BBLS
Coal							
Intermediate 1	12.25	9.625	1,447	NEW	J-55/36#		Y, 18 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	19,463	NEW	P-110HP/20#		Y
Tubing		2.875	6,840	NEW	P-110/6.50#		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	584	15.60	1.20	700.8	SURFACE	8
Coal							
Intermediate 1	CLASS A	569	15.60	1.19	677.11	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,853	15.60	1.19	4,585.07	SURFACE	24
Tubing							

Drillers TD (ft) 19,463' Loggers TD (ft) 19,463'

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

Plug back procedure N/A

Kick off depth (ft) 5,310'

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

RECEIVED
Office of Oil and Gas

APR 20 2021

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____
 WV Department of Environmental Protection

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

08/27/2021

API 47- 009 - 00300 Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well number STATE OF WV DNR A 405H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
MARCELLUS	5,663'	TVD 6,541' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2050 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 5,013 mcfpd Oil 960 bpd NGL _____ bpd Water 1,320 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	
	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

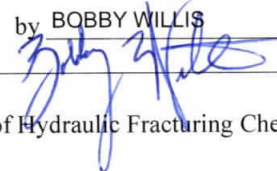
Logging Company BAKER HUGHES
Address 9110 GROGANS MILL ROAD City THE WOODLANDS State TX Zip 77380

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

RECEIVED
Office of Oil and Gas
APR 20 2021

Please insert additional pages as applicable.

Completed by BOBBY WILLIS Telephone 832-796-2884
Signature  Title SENIOR REGULATORY ANALYST Date 4/19/2021

WV Department of
Environmental Protection

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

08/27/2021

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/1/2021
Job End Date:	1/24/2021
State:	West Virginia
County:	Brooke
API Number:	47-009-00300-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	STATE OF WV DNR A BRK 405
Latitude:	40.32112900
Longitude:	-80.53508498
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,598
Total Base Water Volume (gal):	20,293,756
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	88.46376	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.22240	

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 APR 20 2021

SWN FRW-11LC	SWN Well Services	Friction Reducer					
				Listed Below			
Econo-CI200	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Sand	SWN Well Services	Proppant					
				Listed Below			
Plexaid 655WG	SWN Well Services	Scale Inhibitor					
				Listed Below			
HCL	SWN Well Services	Solvent					
				Listed Below			
Tolicide PS 50A	SWN Well Services	Biocide					
				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	11.24891
		Hydrochloric Acid	7647-01-0	15.00000	0.02816
		Petroleum Distillates, Hydrotreated	64742-47-8	25.00000	0.01869
		Tetrakis	55566-30-8	55.00000	0.00937
		Glycerin	56-81-5	50.00000	0.00325

RECEIVED
 Office of Oil and Gas
 APR 20 2021
 WV Department of
 Environmental Protection

			Ammonium Chloride	12125-02-9	2.00000	0.00150	
			Oleic Acid Diethanolamide	93-83-4	1.50000	0.00112	
			Alcohols, C12-1, ethoxylated	68551-12-2	1.50000	0.00112	
			Diethylenetriamine penta	15827-60-8	10.00000	0.00065	
			Acetic Acid	64-19-7	37.50000	0.00038	
			Methanol	67-56-1	80.00000	0.00023	
			Citric Acid	77-92-9	22.50000	0.00023	
			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	0.00001	
			Modified thiourea polymer	68527-49-1	4.74600	0.00001	
			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)

RECEIVED
Office of Oil and Gas
APR 20 2021
NY Department of
Environmental Protection

State of WV DNR A 405H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	12/22/2020	19,379	19,286	36
2	1/1/2021	19,252	19,075	36
3	1/2/2021	19,041	18,864	36
4	1/3/2021	18,831	18,653	36
5	1/3/2021	18,620	18,443	36
6	1/4/2021	18,410	18,232	36
7	1/4/2021	18,199	18,022	36
8	1/5/2021	17,989	17,811	36
9	1/5/2021	17,778	17,600	36
10	1/6/2021	17,563	17,390	36
11	1/6/2021	17,357	17,179	36
12	1/7/2021	17,146	16,969	36
13	1/7/2021	16,936	16,758	36
14	1/8/2021	16,725	16,548	36
15	1/8/2021	16,514	16,337	36
16	1/9/2021	16,304	16,126	36
17	1/9/2021	16,093	15,916	36
18	1/9/2021	15,883	15,705	36
19	1/10/2021	15,672	15,495	36
20	1/10/2021	15,458	15,284	36
21	1/10/2021	15,251	15,073	36
22	1/11/2021	15,040	14,863	36
23	1/11/2021	14,830	14,649	36
24	1/11/2021	14,619	14,442	36
25	1/12/2021	14,407	14,231	36
26	1/12/2021	14,198	14,021	36
27	1/12/2021	13,987	13,810	36
28	1/13/2021	13,777	13,599	36
29	1/13/2021	13,566	13,389	36
30	1/13/2021	13,354	13,178	36
31	1/14/2021	13,145	12,968	36
32	1/14/2021	12,935	12,757	36
33	1/14/2021	12,729	12,546	36
34	1/15/2021	12,513	12,336	36
35	1/15/2021	12,303	12,125	36
36	1/15/2021	12,092	11,915	36
37	1/16/2021	11,882	11,704	36
38	1/17/2021	11,674	11,494	36
39	1/17/2021	11,460	11,283	36
40	1/17/2021	11,250	11,072	36
41	1/18/2021	11,039	10,858	36
42	1/18/2021	10,829	10,651	36
43	1/18/2021	10,613	10,441	36
44	1/19/2021	10,408	10,230	36
45	1/19/2021	10,197	10,019	36
46	1/19/2021	9,986	9,809	36
47	1/20/2021	9,776	9,598	36
48	1/20/2021	9,565	9,388	36
49	1/20/2021	9,355	9,177	36
50	1/21/2021	9,144	8,967	36
51	1/21/2021	8,933	8,756	36
52	1/21/2021	8,723	8,545	36
53	1/22/2021	8,512	8,335	36
54	1/22/2021	8,302	8,124	36
55	1/22/2021	8,091	7,914	36
56	1/23/2021	7,881	7,703	36
57	1/23/2021	7,670	7,492	36
58	1/23/2021	7,459	7,282	36
59	1/23/2021	7,249	7,071	36
60	1/24/2021	7,038	6,861	36
61	1/24/2021	6,828	6,650	36

RECEIVED
Office of Oil and Gas

APR 20 2021

WV Department of
Environmental Protection

08/27/2021

State of WV DNR A 405H
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	1/1/2021	85.13	8,068	8,426	3,326	249,860	7,980	0
2	1/2/2021	91.11	7,926	5,484	4,144	357,420	9,075	0
3	1/3/2021	97.6	8,226	5,515	4,254	357,820	8,681	0
4	1/3/2021	99.67	8,123	5,361	4,716	355,800	8,793	0
5	1/4/2021	100	7,782	5,521	4,622	363,760	8,780	0
6	1/4/2021	99.5	7,864	5,060	4,469	357,440	8,409	0
7	1/5/2021	97.7	8,032	5,689	4,651	356,980	8,566	0
8	1/5/2021	96.2	8,187	3,047	4,352	363,100	8,943	0
9	1/5/2021	100.5	8,127	5,964	5,199	359,460	8,212	0
10	1/6/2021	92.6	7,975	6,420	4,472	358,220	8,826	0
11	1/6/2021	90.4	8,186	5,730	4,592	352,060	8,082	0
12	1/7/2021	93.3	7,913	6,620	4,414	356,820	8,428	0
13	1/7/2021	89	8,220	6,384	4,622	351,200	8,080	0
14	1/8/2021	89.1	7,901	5,590	4,250	359,120	7,973	0
15	1/8/2021	79.55	8,111	4,418	4,489	348,940	9,016	0
16	1/9/2021	88.44	8,074	6,166	4,395	275,900	7,221	0
17	1/9/2021	91.3	8,066	5,858	4,656	357,520	7,814	0
18	1/10/2021	80.4	8,098	4,401	4,673	358,120	7,907	0
19	1/10/2021	95	7,988	4,615	4,307	360,840	8,024	0
20	1/10/2021	93	8,076	6,001	4,639	351,760	7,833	0
21	1/11/2021	92	8,164	5,871	4,628	361,600	8,064	0
22	1/11/2021	90.8	8,050	5,569	4,322	355,540	7,842	0
23	1/11/2021	93.9	8,081	6,127	4,685	356,500	7,853	0
24	1/12/2021	92.7	8,151	5,135	4,480	355,340	7,777	0
25	1/12/2021	96.1	7,747	5,640	4,236	353,400	8,036	0
26	1/12/2021	93.4	8,087	5,678	4,606	355,200	7,843	0
27	1/13/2021	92.5	8,037	5,876	4,554	364,560	8,135	0
28	1/13/2021	97.7	7,827	6,114	4,206	355,700	7,990	0
29	1/13/2021	95.1	7,941	4,427	4,642	359,120	7,900	0
30	1/14/2021	92.4	7,902	6,210	4,570	355,860	7,988	0
31	1/14/2021	96.5	7,993	6,361	4,443	355,780	7,847	0
32	1/14/2021	94.5	7,718	4,631	4,526	352,500	8,016	0
33	1/15/2021	95.8	7,771	4,565	4,474	359,980	7,942	0
34	1/15/2021	97.9	7,676	5,648	4,005	356,580	7,777	0
35	1/15/2021	95.8	7,871	5,788	4,608	355,380	7,825	0
36	1/16/2021	94.5	7,821	5,574	4,623	356,480	7,783	0
37	1/16/2021	95.1	7,679	5,743	4,481	358,980	7,916	0
38	1/17/2021	96.5	7,765	5,708	4,271	362,220	7,824	0
39	1/17/2021	95.7	7,834	6,203	4,271	360,340	7,793	0
40	1/17/2021	97.4	7,577	5,803	4,557	350,300	7,709	0
41	1/18/2021	95.9	7,806	5,874	4,439	357,880	7,687	0
42	1/18/2021	97	7,799	5,944	4,360	361,980	7,590	0
43	1/18/2021	98.6	7,441	5,814	4,469	353,480	7,795	0
44	1/19/2021	97.2	7,475	5,620	4,164	356,540	7,667	0
45	1/19/2021	97.7	7,469	4,300	4,222	355,880	8,193	0
46	1/20/2021	97.5	7,540	5,775	4,454	349,460	7,878	0
47	1/20/2021	99.7	7,398	5,813	4,558	356,940	7,535	0
48	1/20/2021	100	7,168	6,030	4,385	355,880	7,362	0
49	1/21/2021	100	7,203	5,732	4,432	346,640	7,417	0
50	1/21/2021	100	7,370	5,485	4,840	350,840	7,541	0
51	1/21/2021	99.5	7,443	6,389	4,173	355,960	7,522	0
52	1/22/2021	100	6,892	5,978	4,468	354,080	7,569	0
53	1/22/2021	100	7,045	6,128	4,682	350,680	7,674	0
54	1/22/2021	100	6,935	6,145	4,576	353,420	7,543	0
55	1/22/2021	100	6,853	6,131	4,450	353,660	7,477	0
56	1/23/2021	100	6,842	5,101	4,487	355,880	7,755	0
57	1/23/2021	97.5	6,930	6,012	4,489	353,440	7,310	0
58	1/23/2021	100	6,763	5,702	3,995	342,500	7,458	0
59	1/24/2021	100	6,629	6,493	4,354	355,640	7,592	0
60	1/24/2021	99.5	7,055	6,355	4,525	367,420	7,602	0
61	1/24/2021	100	6,698	6,252	4,522	352,760	7,473	0

RECEIVED
Office of Oil and Gas
APR 20 2021
WV Department of Environmental Protection

08/27/2021



Well Name: State of WV DNR A 405H 47009003000000

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	342.00	342.00	
Pottsville (ss)	342.00	342.00	692.00	692.00	
Raven Cliff (ss)	692.00	692.00	943.00	943.00	
Maxton (ss)	943.00	943.00	1242.00	1240.00	
Big Injun (ss)	1242.00	1240.00	1384.00	1379.00	
Berea (siltstone)	1774.00	1751.00	1806.00	1781.00	
Rhinestreet (shale)	5755.00	5160.00	6060.00	5400.00	
Cashaqua (shale)	6060.00	5400.00	6133.00	5453.00	
Middlesex (shale)	6133.00	5453.00	6214.00	5508.00	
Burket (shale)	6214.00	5508.00	6238.00	5523.00	
Tully (ls)	6238.00	5523.00	6344.00	5585.00	
Mahantango (shale)	6344.00	5585.00	6541.00	5663.00	
Marcellus (shale)	6541.00	5663.00	NA	NA	GAS

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 APR 20 2021

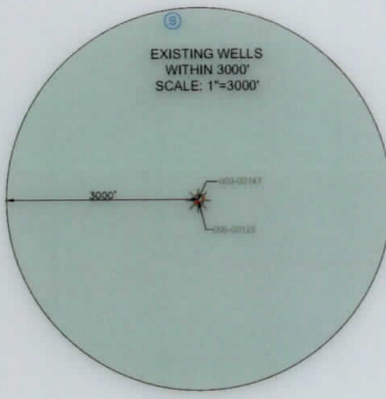
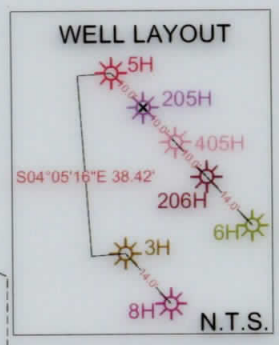
JHA SURVEYORS
COMPANIES ENGINEERS
ENVIRONMENTAL
GIS MAPPING

www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

(2,000' SCALE) LATITUDE: 40°20'00" SURFACE HOLE 9784'
(2,000' SCALE) LATITUDE: 40°22'30" BOTTOM HOLE

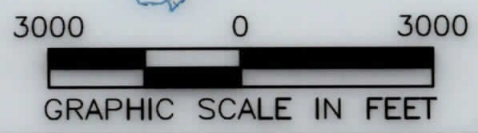
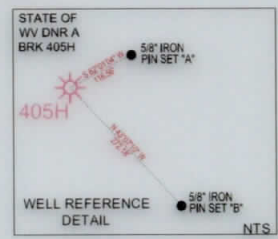


- NOTES ON SURVEY**
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
 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: 4463504.10
EASTING: 539498.53
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4463758.00
EASTING: 540110.54
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4467243.08
EASTING: 538507.38
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4463504.10
EASTING: 539498.53
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4463708.78
EASTING: 540130.25
TURNING POINT LOCATION (TPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4465443.44
EASTING: 539225.90
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4467242.80
EASTING: 538506.36

LINE	BEARING	DISTANCE
L1	N 29°52'57" W	1559.17'
L2	N 16°35'34" E	1419.68'



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 *[Signature]* 2/1/21

SWN Production Company, LLC **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 GRADE GPS ELEVATION: (NAVD 88, US FT)

STATE OF WV DNR A

OPERATOR'S WELL #: BRK 405H

API WELL #: 47 009 00300

STATE COUNTY PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO NORTH ELEVATION: 1,139.8'

DISTRICT: CROSS CREEK COUNTY: BROOKE QUADRANGLE: STEUBENVILLE EAST, OH

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±97.50

OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR 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 (SPECIFY) AS-DRILLED

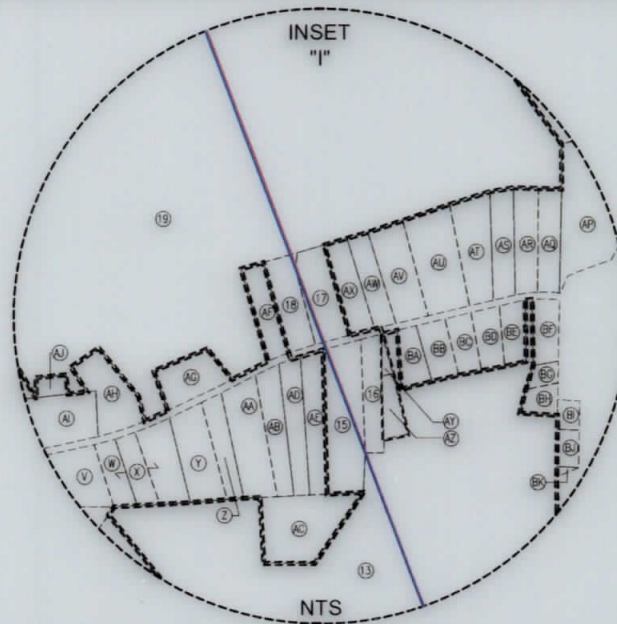
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,697' TVD 19,463' TMD

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

LEGEND:	REVISIONS:	DATE: 04-07-2021
● EXISTING BOTTOM HOLE		API# 047-009-0300
★ EXISTING / PRODUCING WELLHEAD	— ACCESS ROAD	DRAWN BY: R. GRIMES
LPL★ EXISTING LANDING POINT LOCATION	- - - PUBLIC ROAD	SCALE: 1" = 3000'
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— FLOOD PLAIN	DRAWING NO: 2018-245
LPL★ PROPOSED LANDING POINT LOCATION	— LEASE BOUNDARY	WELL LOCATION PLAT
	— AS-DRILLED PATH	
	— PROPOSED PATH	



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	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-CC16-0023.0001
4	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-CC16-0011.0000
5	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-CC16-0010.0000
6	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-CC16-0012.0000
7	RONALD ALLEN REED	04-CC16-0004.0000
8	LAWRENCE & JILL MAZZELLA	04-CC16-0025.0000
9	PAUL MAROSI	04-CC16-0001.0000
10	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0054.0001
11	TAWNIA R. DENNIS	04-CC12-0062.0000
12	SHAWN A. DENNIS	04-C12J-0033.0000
13	PETREL IRREVOCABLE TRUST (NANCY PETREL, TRUSTEE)	04-C11M-0034.0000
14	JAMES E. & NANCY RHODES (SURVIVOR)	04-C11M-0034.0001
15	OPEN DOOR BAPTIST CHURCH	04-C11M-0020.0000
16	DONOVAN L. FLUHARTY	04-C11M-0019.0000
17	LUKE A. MESTER	04-C11M-0008.0000
18	STEPHEN R. & TAMERA K. GRIMM	04-C11M-0007.0000
19	MARK C., JR. & MARY E. SECRIST (SURVIVOR)	04-C11M-0005.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
AG	ROBERT W. CONN	04-C11M-0005.0001
AH	GERALD E. GOURLEY	04-C11M-0004.0000
AI	ST JOHN'S EPISCOPAL CHURCH	04-C11M-0003.0000
AJ	TRUSTEES OF OLDE ST JOHN'S EPISCOPAL CHURCH	04-C11M-0005.0003
AK	MARK, JR. & MARY SECRIST (SURVIVOR)	04-C11M-0001.0000
AL	LINDA BURDISS	04-CC11-0085.0000
AM	WYLIE MCBRIDE, JR. & SUSAN BETH MCBRIDE GRIFFITH	04-CC11-0083.0000
AN	THOMAS J. PATE & JOHN SZYMANEK	04-CC11-0078.0000
AO	PETREL IRREVOCABLE TRUST, DATED 7/25/2013	04-CC12-0005.0000
AP	BRAD A. & MELISSA JO EVANS (SURVIVOR) (L/E: JUDY KEISTER)	04-C12J-0004.0000
AQ	DANIEL PHILLIP KEISTER & DAVID LEE KEISTER	04-C12J-0003.0000
AR	ROBERT L. KERNS, JR. (L/E: PEGGY A. STILLWELL)	04-C12J-0002.0000
AS	KENNETH J., JR. & AMY M. MCLAUGHLIN (SURVIVOR)	04-C12J-0001.0000
AT	GLENN, JR. & VALERIE C. CAIN (SURVIVOR)	04-C11M-0012.0000
AU	LARRY J. & TINA C. DINIACO GASTON (SURVIVOR)	04-C11M-0011.0000
AV	MICHAEL & EMILIA REALE	04-C11M-0005.0002
AW	MICHAEL N. & EMILIE REALE (TRUSTEES)	04-C11M-0010.0000
AX	LUKE A. MESTER	04-C11M-0009.0000
AY	DONOVAN LAWRENCE FLUHARTY	04-C11M-0017.0000
AZ	DONOVAN FLUHARTY	04-C11M-0018.0000
BA	COLLIERS METHODIST CHURCH	04-C11M-0016.0000
BB	STEVEN M. & TAMMY L. KOZORA (SURVIVOR)	04-C11M-0015.0000
BC	TIMOTHY & DIANE J. SWANGO	04-C11M-0014.0000
BD	ROBERT RICHARD LONG	04-C11M-0013.0000
BE	GREGORY FRESHWATER & GARY FRESHWATER	04-C12J-0058.0000
BF	JAMES M. KERNS	04-C12J-0057.0000
BG	NICHOLAS & DEBORAH L. CEBULA; DANIEL L. & JUDITH A. SMITH	04-C12J-0056.0000
BH	JOHN & CARRIE SNATCHKO (SURVIVOR)	04-C12J-0055.0000
BI	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0052.0000
BJ	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0053.0000
BK	STANLEY & SANDRA M. PETROSKY (SURVIVOR)	04-C12J-0054.0000
BL	JAMIE LYNN DEULEY & SHERYL KOSEVIC	04-C12J-0041.0000
BM	SHAWN A. DENNIS	04-C12J-0042.0000
BN	JAMIE DEULEY & SHERYL KOSEVIC	04-C12J-0036.0000
BO	MARK L. TRUEX	04-C12J-0035.0000
BP	PROMISE OF VICTORY CHURCH OF GOD	04-C12J-0032.0000
BQ	DONALD D. FORESTER ETAL	04-C12J-0034.0000
BR	SUSAN PORCH LANTZ	04-C12J-0028.0000
BS	RITA K. THOMAS	04-CC12-0055.0000
BT	TIMOTHY S. & STACY HOOPER (SURVIVOR)	04-CC12-0054.0000
BU	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0053.0000
BV	MATTHEW C. & HOLLY W. LEWIS (SURVIVOR)	04-CC12-0052.0000
BW	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0048.0000
BX	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0047.0000
BY	MARTY R. & DIANA L. LONGWELL (SURVIVOR)	04-CC12-0046.0000
BZ	DIANA L. LONGWELL	04-CC12-0045.0000
CA	BARBARA J. JOHNSTON	04-CC12-0044.0000
CB	BRIAN B. & STEPHANIE J. BUBECK (SURVIVOR)	04-CC12-0043.0000
CC	NATHANIEL J. & AMY L. KUZMA (JTWS)	04-CC16-0026.0001
CD	ARRISSA M. SUTER & KENNETH A. COCHRIN (SURVIVOR)	04-CC16-0027.0000
CE	NEIL E., JR. & MICHELLE L. VANCAMP (SURVIVOR)	04-CC16-0028.0000
CF	WILLIAM RICHARD WILLS	04-CC16-0033.0000
CG	JASON P. NUZUM	04-CC16-0031.0000
CH	TIMOTHY S. & STACY HOOPER (SURVIVOR)	04-CC12-0054.0000
CI	DENNIS MOLNAR, SR. & DENNIS MOLNAR, JR.	04-CC16-0013.0000
CJ	DONNA K. ROSS (J) & WILLIAM J. PAULES (J)	04-CC16-0014.0000
CK	TIMOTHY BRIAN CUNNINGHAM	04-CC16-0015.0000
CL	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0019.0000
CM	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0021.0000
CN	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0022.0000
CO	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0023.0000
CP	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0008.0000
CQ	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0046.0000
CR	RICHARD B. GASVODA	04-CC16-0001.0004
CS	RICHARD B. GASVODA	04-CC16-0001.0001
CT	RALPH A. BRADY, II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0003.0000
CU	RALPH A. BRADY, II & JOYCE ANN JOHNSTON (SURVIVOR)	04-CC16-0003.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0000
B	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC20-0025.0001
C	COLLIERS SPORTSMAN CLUB	04-CC20-0024.0000
D	COLLIERS SPORTSMAN CLUB	04-CC20-0045.0000
E	FREDA M. DUNN & SANDRA ROBERT (L/E: FREDA DUNN)	04-CC20-0001.0000
F	DAVID C. DAMI	04-CC20-0001.0001
G	STATE OF WEST VIRGINIA, DIVISION OF NATURAL RESOURCES	04-CC16-0006.0000
H	THE PALFALVY IRREVOCABLE TRUST (DENNIS PALFALVY, III)	04-CC16-0005.0000
I	TERRY A. DAMI & ET AL (L/E: JOSEPH T. & LOIS C. DAMI)	04-CC16-0009.0000
J	REED GERHRLING FAMILY TRUST, DATED 10/17/2008	04-CC16-0032.0000
K	LAURA J. & STUART STEUDEBAKER	04-C15D-0030.0000
L	DAVID L. & CHERYL D. WILLL	04-C11S-0058.0000
M	RONALD C. BOTTORF, II	04-C11S-0092.0000
N	RONALD C. BOTTORF, II	04-C11S-0091.0000
O	PETER M. & LYNN A. MARTIN (SURVIVOR)	04-C11S-0093.0000
P	DAVID P. MELLISH	04-C11S-0089.0000
Q	DWAYNE WADLEY & CATHLEEN L. DONNE (JTWS)	04-C11S-0096.0000
R	DAVID P. MELLISH	04-C11M-0035.0000
S	DAVID LANCASTER	04-C11M-0032.0000
T	LAWRENCE V. & LISA L. PERRONE (SURVIVOR)	04-C11M-0033.0000
U	PAUL MAROSI	04-C11M-0029.0000
V	PAUL MAROSI	04-C11M-0028.0000
W	BARBARA MCVICKER & MARIA FRANCIS	04-C11M-0027.0000
X	JEFFREY W. & MARIA L. FRANCIS (SURVIVOR)	04-C11M-0027.0001
Y	JAMES W. RAHR	04-C11M-0026.0000
Z	RUSSELL E. RECH, III	04-C11M-0025.0000
AA	MARY L. LEMASTERS	04-C11M-0024.0000
AB	ROBERT S. LATIMER	04-C11M-0023.0000
AC	OPEN DOOR BAPTIST CHURCH	04-C11M-0034.0002
AD	EDWARD & KATHY CRUNY (FNA: KATHY CANTOR) (SURVIVOR)	04-C11M-0022.0000
AE	EUGENE R. & PATRICIA L. VISCO	04-C11M-0021.0000
AF	STEPHEN R. & TAMERA K. GRIMM	04-C11M-0006.0000

08/27/2021

REVISIONS:	COMPANY:		
	OPERATOR'S	STATE OF WV DNR A	
	WELL #:	BRK 405H	
	DISTRICT:	COUNTY:	STATE:
	CROSS CREEK	BROOKE	WV
		DATE:	04-07-2021
		API#	047-009-0300
		DRAWN BY:	R. GRIMES
		SCALE:	N/A
		DRAWING NO:	2018-245
		WELL LOCATION PLAT	