

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

JAN 29 2021

WV Department of
Environmental Protection

API 47 - 069 - 00310 County OHIO District RICHLAND
Quad TILTONSVILLE, OH-WV Pad Name FRANZ THOMAN-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name FRANZ THOMAN Well Number FRANZ THOMAN OHI 3H
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 4,442,987.61 Easting 528,975.66
Landing Point of Curve Northing 4,443,125.40 Easting 528,868.15
Bottom Hole Northing 4,448,012.46 Easting 527,423.16

Elevation (ft) 1137.3' 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 10/8/2019 Date drilling commenced 1/12/2020 Date drilling ceased 1/26/2020
Date completion activities began 9/14/2020 Date completion activities ceased 10/30/2020
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 326' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 473' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 344' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
Bary Illidge
09/10/2021

API 47-069 - 00310

Farm name FRANZ THOMAN

Well number FRANZ THOMAN OHI 3H

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	426	NEW	J-55/54.50#	320' / 325'	Y
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1,752	NEW	J-55/36#		Y, 42 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	23,194	NEW	P-110/20#		Y, 8 BBLS
Tubing		2.875	6,403	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	677	15.60	1.19	805.63	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	674	15.60	1.19	802.06	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4,428	15.60	1.18	5,225.04	SURFACE	24
Tubing							

Drillers TD (ft) 23,194' Loggers TD (ft) 23,194'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5,021'

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
 JAN 29 2021
 WV Department of
 Environmental Protection

**FRANZ THOMAN OHI 3H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	8/5/2020	23,145	23,052	36
2	9/15/2020	23,018	22,841	36
3	9/16/2020	22,808	22,630	36
4	9/17/2020	22,597	22,420	36
5	9/17/2020	22,387	22,210	36
6	9/17/2020	22,177	21,998	36
7	9/18/2020	21,971	21,789	36
8	9/18/2020	21,756	21,579	36
9	9/18/2020	21,544	21,369	36
10	9/19/2020	21,336	21,158	36
11	9/19/2020	21,125	20,948	36
12	9/20/2020	20,915	20,738	36
13	9/20/2020	20,705	20,530	36
14	9/21/2020	20,494	20,317	36
15	9/21/2020	20,284	20,107	36
16	9/22/2020	20,074	19,895	72
17	9/23/2020	19,864	19,686	36
18	9/23/2020	19,653	19,476	36
19	9/24/2020	19,443	19,266	36
20	9/24/2020	19,233	19,055	36
21	9/24/2020	19,022	18,845	36
22	9/24/2020	18,812	18,635	36
23	9/25/2020	18,602	18,424	36
24	9/25/2020	18,391	18,214	36
25	9/26/2020	18,181	18,000	36
26	9/26/2020	17,971	17,794	36
27	9/26/2020	17,761	17,583	36
28	9/27/2020	17,550	17,373	36
29	9/27/2020	17,340	17,165	36
30	9/27/2020	17,130	16,952	36
31	9/28/2020	16,919	16,742	36
32	9/28/2020	16,709	16,532	36
33	9/28/2020	16,499	16,321	36
34	9/29/2020	16,288	16,111	36
35	9/29/2020	16,078	15,904	36
36	9/29/2020	15,868	15,691	36
37	9/29/2020	15,658	15,480	36
38	9/30/2020	15,447	15,274	36
39	9/30/2020	15,237	15,060	36
40	10/1/2020	15,027	14,849	36
41	10/1/2020	14,816	14,639	36
42	10/1/2020	14,606	14,429	36
43	10/2/2020	14,396	14,218	36

RECEIVED
 Office of Oil and Gas
 JAN 29 2021
 WV Department of
 Environmental Protection

**FRANZ THOMAN OHI 3H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	10/2/2020	14,185	14,008	36
45	10/2/2020	13,979	13,798	36
46	10/3/2020	13,765	13,588	36
47	10/3/2020	13,555	13,377	36
48	10/3/2020	13,344	13,167	36
49	10/4/2020	13,134	12,957	36
50	10/4/2020	12,944	12,746	36
51	10/5/2020	12,709	12,536	36
52	10/5/2020	12,503	12,326	36
53	10/6/2020	12,293	12,115	36
54	10/7/2020	12,082	11,905	36
55	10/7/2020	11,872	11,695	36
56	10/7/2020	11,662	11,485	36
57	10/8/2020	11,452	11,278	36
58	10/8/2020	11,241	11,064	36
59	10/8/2020	11,031	10,854	36
60	10/9/2020	10,821	10,643	36
61	10/9/2020	10,610	10,433	36
62	10/9/2020	10,400	10,223	36
63	10/9/2020	10,190	10,012	36
64	10/10/2020	9,979	9,802	36
65	10/10/2020	9,769	9,592	36
66	10/10/2020	9,557	9,382	36
67	10/11/2020	9,349	9,171	36
68	10/11/2020	9,138	8,961	36
69	10/11/2020	8,928	8,751	36
70	10/12/2020	8,715	8,540	36
71	10/12/2020	8,507	8,330	36
72	10/12/2020	8,297	8,120	36
73	10/13/2020	8,087	7,909	36
74	10/13/2020	7,876	7,699	36
75	10/13/2020	7,666	7,489	36
76	10/13/2020	7,456	7,279	36
77	10/13/2020	7,246	7,073	36
78	10/14/2020	7,035	6,858	36
79	10/14/2020	6,830	6,648	36
80	10/14/2020	6,615	6,437	36
81	10/15/2020	6,404	6,227	36

WV Department of
Environmental Protection

JAN 29 2021

RECEIVED
Office of Oil and Gas

JAN 29 2021

FRANZ THOMAN OHI 3H

ATTACHMENT 2

STIM REPORT

WV Department of
Environmental Protection

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	9/15/2020	65.3	8,245	8,440	3,322	217,780	8,394	0
2	9/16/2020	94	8,122	6,011	4,301	377,700	8,453	0
3	9/16/2020	90.9	7,880	3,423	4,446	356,900	8,456	0
4	9/17/2020	89	7,958	3,559	4,589	354,430	8,458	0
5	9/17/2020	83.5	7,861	5,443	4,370	355,020	8,427	0
6	9/17/2020	89.3	7,930	5,308	4,334	358,200	9,151	0
7	9/18/2020	87.9	7,850	5,300	4,487	344,420	8,320	0
8	9/18/2020	83.7	7,659	5,707	4,381	357,260	9,565	0
9	9/19/2020	77.9	7,967	4,287	4,129	347,960	7,765	0
10	9/19/2020	85	7,856	5,442	4,316	356,680	8,124	0
11	9/19/2020	88.4	8,150	5,327	4,239	356,560	7,901	0
12	9/20/2020	88.3	7,951	5,401	4,367	349,080	8,106	0
13	9/20/2020	91.6	8,132	5,461	4,132	359,640	8,052	0
14	9/21/2020	89.6	7,978	5,746	4,458	357,180	8,037	0
15	9/22/2020	85.7	8,082	4,895	4,069	370,280	7,866	0
16	9/23/2020	77.3	7,655	5,284	4,415	356,440	14,704	0
17	9/23/2020	87.7	7,950	5,765	4,359	361,620	7,895	0
18	9/23/2020	78.5	7,988	5,728	3,865	360,260	8,302	0
19	9/24/2020	94	7,849	5,389	4,546	349,580	8,079	0
20	9/24/2020	88	7,956	5,639	4,253	356,140	8,060	0
21	9/24/2020	84.1	8,035	5,800	4,224	352,340	7,902	0
22	9/25/2020	91.1	8,040	5,486	4,777	354,720	7,619	0
23	9/25/2020	88.1	8,120	5,516	4,365	361,240	7,803	0
24	9/26/2020	92	8,009	5,496	4,598	354,880	7,985	0
25	9/26/2020	88.9	7,906	5,630	4,594	358,240	8,090	0
26	9/26/2020	89.2	7,906	5,751	4,245	353,680	7,474	0
27	9/26/2020	92	7,989	5,589	4,115	360,940	7,784	0
28	9/27/2020	88.9	7,783	5,720	4,606	360,820	8,001	0
29	9/27/2020	92.2	8,089	5,375	4,275	359,780	7,817	0
30	9/28/2020	87.4	8,029	5,556	4,592	352,510	7,854	0
31	9/28/2020	92.7	7,856	5,622	4,496	364,040	7,976	0
32	9/28/2020	94.3	7,855	5,644	4,286	362,280	7,859	0
33	9/29/2020	91.6	8,065	5,824	4,009	356,840	7,843	0
34	9/29/2020	94	7,714	5,732	4,325	354,860	7,863	0
35	9/29/2020	93.5	7,754	5,461	4,709	356,940	7,744	0
36	9/29/2020	92.2	7,953	5,833	4,679	358,540	7,874	0
37	9/30/2020	91	7,661	5,794	4,064	362,280	7,438	0
38	9/30/2020	95.9	7,918	5,210	4,366	354,320	7,475	0
39	9/30/2020	100	7,751	5,323	4,081	355,880	7,616	0
40	10/1/2020	98.2	7,788	5,524	4,468	352,320	7,954	0
41	10/1/2020	97.5	7,889	4,674	4,435	357,580	7,892	0
42	10/2/2020	83.2	7,349	5,424	4,164	354,880	7,842	0
43	10/2/2020	100	7,582	5,219	4,565	356,040	7,917	0
44	10/2/2020	100	7,545	5,469	4,388	347,810	8,056	0
45	10/3/2020	99.6	7,507	4,977	4,620	367,420	7,828	0
46	10/3/2020	99.3	7,805	5,351	4,656	355,760	7,873	0
47	10/3/2020	97.6	7,661	5,550	4,265	358,620	7,825	0
48	10/4/2020	100	7,586	5,161	4,060	350,580	7,556	0
49	10/4/2020	97.1	7,847	5,436	4,095	354,800	7,951	0
50	10/5/2020	97.3	7,247	5,044	4,654	370,200	8,608	0
51	10/5/2020	99.4	7,227	5,175	4,793	355,940	8,102	0
52	10/6/2020	99.3	7,383	4,861	4,655	358,540	8,003	0
53	10/7/2020	99.5	7,340	5,401	4,252	362,180	7,726	0

FRANZ THOMAN OHI 3H

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	10/7/2020	99.8	7,264	5,409	4,982	349,920	7,618	0
55	10/7/2020	95.4	7,129	5,444	4,876	356,800	7,320	0
56	10/7/2020	94.8	7,524	5,960	4,381	377,740	8,486	0
57	10/8/2020	94.4	7,455	6,621	4,477	358,900	7,734	0
58	10/8/2020	94.5	7,480	5,920	4,456	367,500	7,877	0
59	10/8/2020	98.3	7,562	5,715	4,320	358,180	7,768	0
60	10/9/2020	95.8	7,123	4,328	4,587	360,200	8,013	0
61	10/9/2020	98.1	7,487	5,078	3,655	366,980	7,923	0
62	10/9/2020	96.2	7,703	5,050	4,105	359,820	7,693	0
63	10/10/2020	97.1	7,069	5,778	4,089	352,400	7,679	0
64	10/10/2020	100.3	6,972	5,966	4,436	359,560	7,875	0
65	10/10/2020	100.2	7,215	4,633	4,219	353,180	7,844	0
66	10/11/2020	99.2	7,161	5,233	4,294	354,000	7,691	0
67	10/11/2020	96.7	7,414	5,472	4,351	357,880	8,092	0
68	10/11/2020	98.7	7,368	6,774	4,223	360,640	7,596	0
69	10/12/2020	97.8	7,378	6,367	4,226	356,800	7,862	0
70	10/12/2020	99.5	7,170	5,771	4,466	353,020	7,823	0
71	10/12/2020	100.2	7,011	5,456	4,589	363,580	7,919	0
72	10/13/2020	97.3	7,003	5,523	4,540	269,160	6,964	0
73	10/13/2020	76.3	8,210	5,618	4,315	292,580	9,568	0
74	10/13/2020	99.4	6,948	5,447	4,465	363,600	7,937	0
75	10/13/2020	100	6,931	5,552	4,280	352,160	7,910	0
76	10/13/2020	100.5	6,730	5,257	4,312	372,660	8,138	0
77	10/14/2020	100	6,658	4,940	4,736	375,960	8,045	0
78	10/14/2020	95	7,149	5,129	4,249	370,630	7,640	0
79	10/14/2020	98.8	6,997	5,148	4,316	355,580	7,802	0
80	10/15/2020	97.1	6,627	5,246	4,339	351,900	7,788	0
81	10/15/2020	100	5,935	6,335	3,061	353,720	7,675	0

RECEIVED
Office of Oil and Gas
JAN 29 2021
WV Department of
Environmental Protection



Well Name: Franz Thoman OHI 3H 47069003100000

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	326.00	326.00	
Top of Salt Water	473.00	473.00	NA	NA	
Pittsburgh Coal	344.00	344.00	349.00	349.00	
Pottsville (ss)	463.00	463.00	824.00	824.00	
Raven Cliff (ss)	824.00	824.00	1111.00	1111.00	
Maxton (ss)	1111.00	1111.00	1430.00	1419.00	
Big Injun (ss)	1430.00	1419.00	5351.00	5323.00	
Rhinestreet (shale)	5351.00	5323.00	5648.00	5578.00	
Cashaqua (shale)	5648.00	5578.00	5715.00	5627.00	
Middlesex (shale)	5715.00	5627.00	5820.00	5695.00	
Burket (shale)	5820.00	5695.00	5850.00	5711.00	
Tully (ls)	5850.00	5711.00	5943.00	5761.00	
Mahantango (shale)	5943.00	5761.00	6137.00	5835.00	
Marcellus (shale)	6137.00	5835.00	NA	NA	GAS

RECEIVED
Office of Oil and Gas
JAN 29 2021
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/15/2020
Job End Date:	10/15/2020
State:	West Virginia
County:	Ohio
API Number:	47-069-00310-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	FRANZ THOMAN OHI 3
Latitude:	40.13672168
Longitude:	-80.65986740
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,793
Total Base Water Volume (gal):	27,315,390
Total Base Non Water Volume:	0



RECEIVED
Office of Oil and Gas
JAN 29 2021
WV Department of
Environmental Protection



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	88.54927	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.22011	

09/10/2021

RECEIVED
Office of Oil and Gas
JAN 29 2021
WV Department of
Environmental Protection

Ecopol-FEAC	SWN Well Services	Iron Control			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				
Tolicide PS 50A	SWN Well Services	Biocide			Listed Below				
SWN FRW-11LC	SWN Well Services	Friction Reducer			Listed Below				
HCL	SWN Well Services	Solvent			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	11.15902			
			Hydrochloric Acid	7647-01-0	15.00000	0.02575			
			Petroleum Distillates, Hydrotreated	64742-47-8	25.00000	0.02095			
			Tetrakis	55566-30-8	55.00000	0.01537			
			Glycerin	56-81-5	50.00000	0.00354			

			Ammonium Chloride	12125-02-9	2.00000	0.00168
			Alcohols, C12-1, ethoxylated	68551-12-2	1.50000	0.00126
			Oleic Acid	93-83-4	1.50000	0.00126
			Diethanolamide			
			Diethylenetriamine penta	15827-60-8	10.00000	0.00071
			Acetic Acid	64-19-7	37.50000	0.00034
			Acrylic acid terpolymer	397256-50-7	1.00000	0.00028
			Methanol	67-56-1	80.00000	0.00021
			Citric Acid	77-92-9	22.50000	0.00021
			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
JAN 29 2021
WV Department of
Environmental Protection

LATITUDE: 40°10'00" SURFACE HOLE (2000' SCALE)

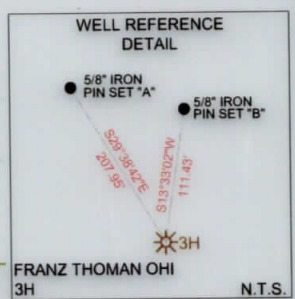
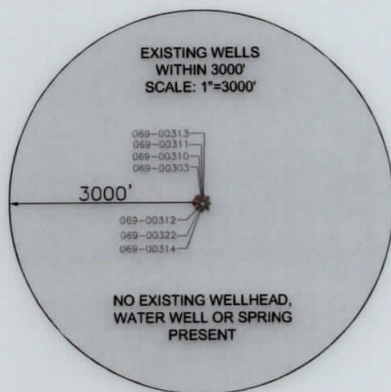
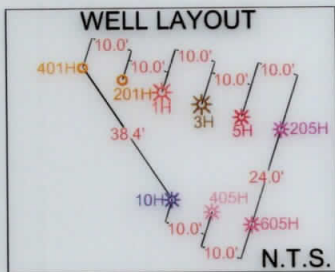
9744'

LATITUDE: 40°12'30" BOTTOM HOLE (2000' SCALE)

3181'



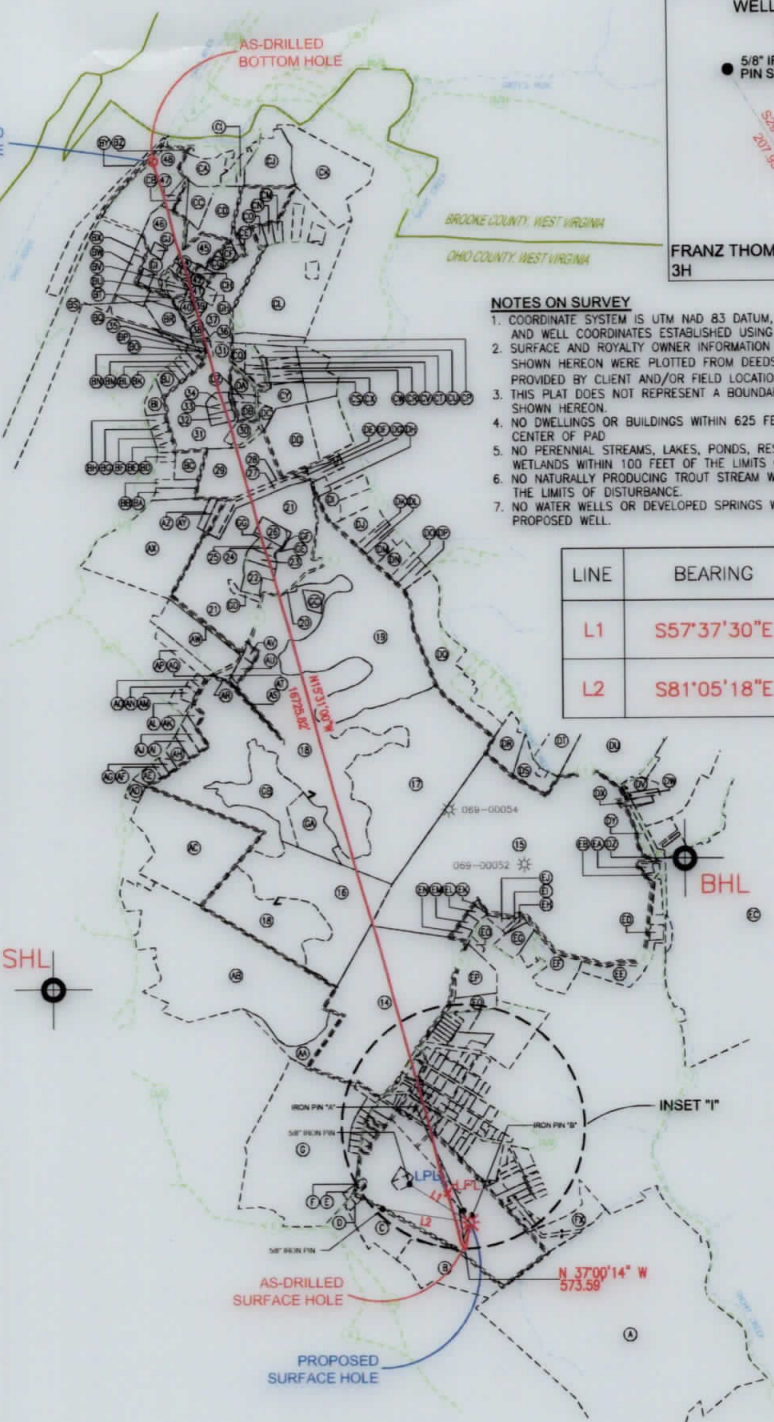
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100



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.

LINE	BEARING	DISTANCE
L1	S57°37'30"E	1119.40'
L2	S81°05'18"E	1386.82'



SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4442987.61 EASTING: 528975.66
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4443125.40 EASTING: 528868.15
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448012.46 EASTING: 527423.16
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4442987.61 EASTING: 528975.66
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4443075.34 EASTING: 528887.72
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448011.84 EASTING: 527426.85



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

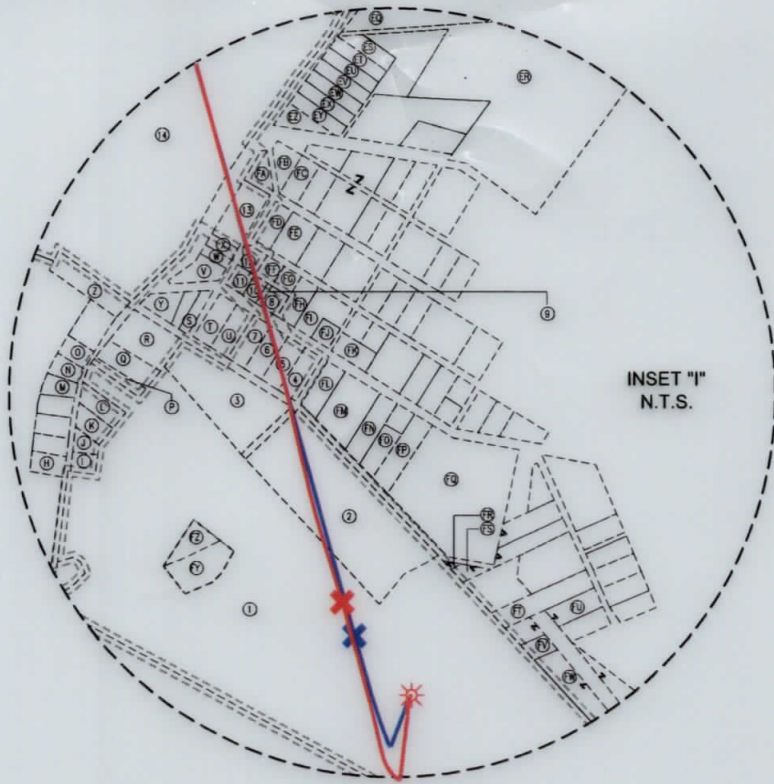
COMPANY: **SWN** Production Company, LLC

WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	FRANZ THOMAN OHI
	PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: 3H	API WELL #: 47 069 00310 STATE COUNTY PERMIT

WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	ELEVATION: 1,137.3'
WATERSHED: UPPER OHIO SOUTH	QUADRANGLE: TILTONSVILLE, OH-WV
DISTRICT: RICHLAND COUNTY: OHIO	ACREAGE: ±69.418
SURFACE OWNER: FRANZ THOMAN	ACREAGE: ±69.418
OIL & GAS ROYALTY OWNER: FRANZ THOMAN	ESTIMATED DEPTH: 5,879' TVD 23,194' TMD

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 <input type="checkbox"/>	CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED
TARGET FORMATION: MARCELLUS	DESIGNATED AGENT: BRITTANY WOODY
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND: ○ EXISTING BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL ○ EXISTING LANDING POINT LOCATION ○ PROPOSED SURFACE HOLE / BOTTOM HOLE LPL* PROPOSED LANDING POINT LOCATION — ACCESS ROAD — PUBLIC ROAD — FLOOD PLAN — LEASE BOUNDARY — AS-DRILLED PATH — PROPOSED PATH	REVISIONS: DATE: 06-03-2020 API NO: 47-069-00310 DRAWN BY: R. GRIMES SCALE: 1" = 3000' DRAWING NO: 2018-781 WELL LOCATION PLAT
---	--

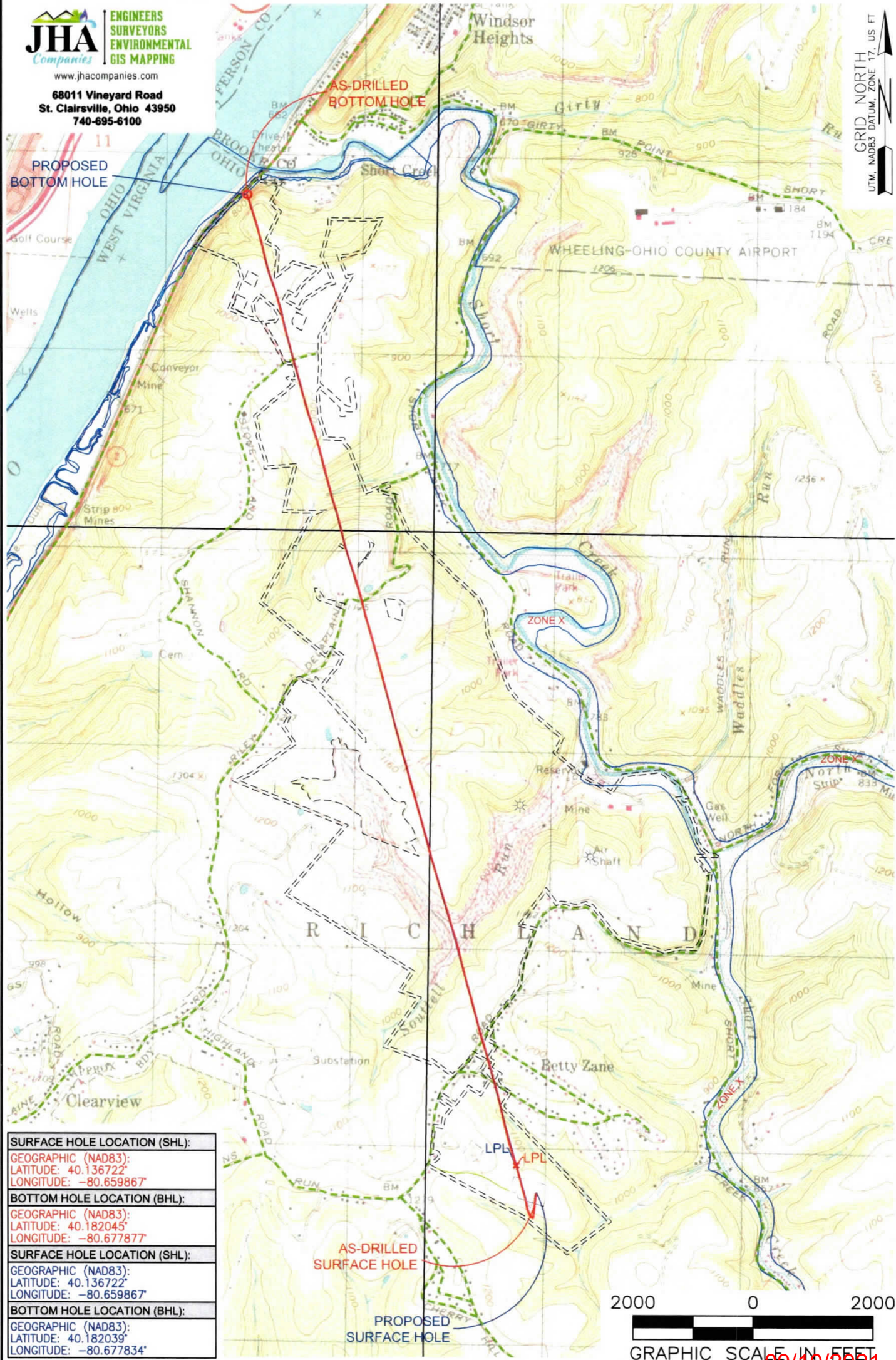


WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	FRANZ THOMAN (S)/(R)	04-R8-62.0
TRACT	SURFACE OWNER	TAX PARCEL
2	SUSAN J. SOBOTA	04-R8-62.3
3	DELORA L. TAYLOR	04-R8K-100.0
4	JOHN M. JR. & P.R. BORING	04-R8K-94.0
5	CHRIS P. WINESDOERFFER	04-R8K-93.0
6	CHRIS P. WINESDOERFFER	04-R8K-92.0
7	JAY E. & R.P. CLEGG	04-R8K-91.0
8	MARK D. & MINDY D. PANEPINTO	04-R8K-67.2
9	MARK D. & MINDY D. PANEPINTO	04-R8K-67.0
10	CAROL ANN EDDY	04-R8K-67.3
11	ALBERT L. & M.J. CAGE	04-R8K-64.0
12	ALBERT L. & M.J. CAGE	04-R8K-63.0
13	RICHARD J. WEILER	04-R8K-55.0
14	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R8-05.0
15	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R8-06.0
16	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R8-03.1
17	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R5-43.0
18	TUNNEL RIDGE, LLC	04-R5-40.7
19	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R5-42.1
20	WV DOT, DIVISION OF HIGHWAYS	CLEARVIEW AVE
21	RALPH J & BEVERLY KRASEVEC	04-R5-21.10
22	RALPH J & BEVERLY KRASEVEC	04-R5-21.1
23	RALPH JAY KRASEVEC	04-R5-21.12
24	TIMOTHY S. TRACY	04-R5-21.7
25	TIMOTHY S. TRACY	04-R5-21.6
26	TIMOTHY S. TRACY	04-R5-21.4
27	TUNNEL RIDGE, LLC	04-R5-21.13
28	TUNNEL RIDGE, LLC	04-R5-21.2
29	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R5-02.2
30	GEORGE M. ROMAN	04-R5-02.43
31	JAMES M., JR. & TINA M. FRAGALE	04-R5-02.0
32	PAUL R. & CHRISTINA E. DAVIS	04-R5-02.62
33	SCOTT A. & MELISSA A. MEALY	04-R5-02.61
34	SCOTT A. & MELISSA A. MEALY	04-R5-02.63
35	REBECCA JACK	04-R5-01.1
36	REBECCA A. JACK	04-R5-71.0
37	THOMAS H. & MARGARET A. STENGER	04-R2-06.1
38	CHARLES A. & MICHELLE R. FISHER	04-R5-74.0
39	DEBBIE SCHRADER	04-R2-06.19
40	LAURIE A. MURPHY	04-R5-73.0
41	PHILIP JAY HALESKI	04-R2-06.17
42	JOSE & DANIELLE FUENTES	04-R2-06.10
43	JOHN C. ROBINSON	04-R2-06.14
44	ROBERT RICHARD & AMY RICHARD	04-R2-06.12
45	KEITH A. & D.D. WEAR	04-R2-06.4
46	JEFFREY W. & CYNTHIA A. SIEGWART	04-R2-02.0
47	DENNIS H. BAKER & KELLY YOUNG BAKER	04-R2-02.5
48	JEFFREY W. & CYNTHIA A. SIEGWART	4-R4-9999-9999

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	SANDSCREST FOUNDATION INC.	04-R11-15.0
B	TUNNEL RIDGE, LLC	04-R8-62.5
C	TUNNEL RIDGE, LLC	04-R8-62.4
D	TUNNEL RIDGE, LLC	04-R8P-14.0
E	SHIRLEY M. WEAVER	04-R8P-02.0
F	TUNNEL RIDGE, LLC	04-R8P-16.0
G	ALLIANCE RESOURCE GROUP, LLC	04-R8-51.0
H	JOHN M. MCGEE	04-R8P-17.0
I	DONALD P. GAYDA	04-R8P-18.0
J	CHARLES R. BOND	04-R8K-110.0
K	TYLER S. SCHWERTFEGER	04-R8K-111.0
L	TYLER S. SCHWERTFEGER	04-R8K-112.0
M	ELMER K. REED	04-R8K-106.0
N	ELMER K. REED	04-R8K-105.0
O	BERNARD H. & KIMBERLY J. BOZENSKE	04-R8K-104.0
P	RAY B. & ANN M. WILSON	04-R8-62.7
Q	ERIC DURELL & CHERYL LYNN RICHARDSON	04-R8-62.6
R	DAVID R. & KAREN MULDREW	04-R8K-101.0
S	DELORA L. TAYLOR	04-R8K-88.0
T	DELORA L. TAYLOR	04-R8K-89.0
U	JAY E. & RENEE P. CLEGG	04-R8K-90.0
V	SHAWN C. DENARD	04-R8K-62.0
W	TIMOTHY G. HEATH	04-R8K-60.0
X	TIMOTHY G. HEATH	04-R8K-59.0
Y	DAVID R. & KAREN MULDREW	04-R8K-86.0
Z	ROBERT D. & PATSY G. HERCULES	04-R8K-113.0
AA	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R8-04.13
AB	PAUL BAKER	04-R8-04.18
AC	TUNNEL RIDGE, LLC	04-R8-03.2
AD	RICHARD A. & NANCY SCHELL	04-R8-01.1
AE	PAUL & REBECCA WEIGAND FAMILY TRUST, DATED 10/23/2012	04-R5-40.1
AF	RICHARD A. & JOAN E. KLEMM	04-R5-36.1
AG	MARK R. & ELLIE ANTLEY	04-R5-36.2
AH	JOSEPH L. MONTEMURRO	04-R5-37.0
AI	ANTHONY J., JR. & TEXANNA BRANCH	04-R5-38.0
AJ	TIMOTHY R. BAKER	04-R5-39.0
AK	CLARENCE F. & DIANA MAE HOWELL	04-R5-40.3
AL	CHRISTOPHER & JENNIFER MEANS	04-R5-30.7
AM	CARL J. KUCERA	04-R5-30.3
AN	BETTY JO BOWMAN	04-R5-29.0
AO	MARGARET ANN SCHENERLEIN & KIM M. WILDS	04-R5-28.0
AP	MARGARET A. SCHENERLEIN & SUNDAE L. FASSIG	04-R5-27.0
AQ	TUNNEL RIDGE, LLC	04-R5-40.5
AR	RONALD L. & SANDRA L. RICHIE	04-R5-40.6
AS	TUNNEL RIDGE, LLC	04-R5-40.4
AT	RONALD L. & SANDRA L. RICHIE	04-R5-40.2
AU	RONALD L. & SANDRA L. RICHIE	04-R5-42.2
AV	JAMES RAPER	04-R5-41.0
AW	RALPH J. & BEVERLY A. KRASEVEC	04-R5-21.5
AX	JULIE B. KLEIN, JUDITH A. PATI & SARA L. PLUMBLY-ELUE	04-R5-23.0
AY	THE JOSEPH W. CRAFT, III FOUNDATION & THE KATHLEEN S. CRAFT FOUNDATION	04-R5-22.1

09/10/2021

REVISIONS:	COMPANY: SWN Production Company, LLC		DATE: 06-03-2020	
	OPERATOR'S: FRANZ THOMAN OHI		API NO: 47-069-00310	
	WELL #: 3H		DRAWN BY: R. GRIMES	
	DISTRICT: RICHLAND	COUNTY: OHIO	STATE: WV	SCALE: N/A
				DRAWING NO: 2018-781
	WELL LOCATION PLAT			



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.136722'
LONGITUDE: -80.659867'
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.182045'
LONGITUDE: -80.677877'
SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.136722'
LONGITUDE: -80.659867'
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.182039'
LONGITUDE: -80.677834'

NOTES ON SURVEY

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

RECEIVED
 Office of Oil and Gas
 JAN 29 2021

LEGEND:

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

WELL OPERATOR:
 SWN PRODUCTION COMPANY, LLC

ADDRESS:
 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508

SURFACE OWNER:
 FRANZ THOMAN

WELL (FARM) NAME:
 FRANZ THOMAN OHI

COUNTY: OHIO **CODE:** 069 **DISTRICT:** RICHLAND

USGS 7 1/2 QUADRANGLE MAP NAME:
 TILTONVILLE, OH-WV

WELL # 3H **SERIAL #** XXXX

API # 47-069-00310