

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

API 47-069-00328 County OHIO District LIBERTY
Quad VALLEY GROVE, WV Pad Name CARL ROTTER-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name CARL J. & GRACE A. ROTTER Well Number CARL ROTTER OHI 10H
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 4,439,129.04 Easting 538,993.31
Landing Point of Curve Northing 4,439,099.83 Easting 539,223.34
Bottom Hole Northing 4,434,514.52 Easting 541,065.62

Elevation (ft) 1336.7' 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 11/12/2020 Date drilling commenced 4/13/2022 Date drilling ceased 4/27/2022
Date completion activities began 6/14/2022 Date completion activities ceased 7/27/2022
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 587' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 834' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 723' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED
Reviewed by:
[Signature]
10/11/2022

10/21/2022

API 47-069 - 00328 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 10H

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	136	NEW	J-55/94#		Y
Surface	17.5	13.375	764	NEW	J-55/54.5#		Y; 39 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2,206	NEW	K-55/36#		Y; 25 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	23,335	NEW	P-110/20#		Y; 11 BBLS
Tubing		2.875	7,078	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	693	15.60	1.20	831.60	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	752	15.60	1.19	894.88	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4,773	15.00	1.29	6,157.17	SURFACE	24
Tubing							

Drillers TD (ft) 23,335' Loggers TD (ft) 23,335'
 Deepest formation penetrated MARCELLUS Plug back to (ft) 23,243'
 Plug back procedure N/A

Kick off depth (ft) 5,830'

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: 11 CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: 30 CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: 450 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 _____

10/21/2022

API 47- 069 - 00328 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENT	1		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	ATTACHMENT	2				

Please insert additional pages as applicable.

API 47- 069 - 00328 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 10H

PRODUCING FORMATION(S)	DEPTHS	
	TVD	MD
MARCELLUS	6,557'	6,790'

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 3,249 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs
 OPEN FLOW Gas 5650 mcfpd Oil 545 bpd NGL _____ bpd Water 1,764 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 RD City THE WOODLANDS State TX Zip 77380
 Cementing Company SCHLUMBERGER WELL SERVICES
 Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478
 Stimulating Company SWN WELL SERVICES
 Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Please insert additional pages as applicable.

Completed by DENISE GRANTHAM Telephone 832-796-6139
 Signature *Denise Grantham* Title REGULATORY ANALYST Date 8/29/2022

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

10/21/2022



Well Name:

Carl Rotter OHI 10H

47069003280000

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	587.00	587.00	
Top of Salt Water	834.00	834.00	NA	NA	
Pittsburgh Coal	723.00	723.00	728.00	728.00	
Pottsville (ss)	836.00	836.00	989.00	989.00	
Raven Cliff (ss)	1229.00	1228.00	1472.00	1471.00	
Maxton (ss)	1635.00	1634.00	1886.00	1883.00	
Big Injun (ss)	1886.00	1883.00	2209.00	2203.00	
Berea (siltstone)	2381.00	2373.00	2473.00	2464.00	
Rhinestreet (shale)	5976.00	5935.00	6290.00	6234.00	
Cashaqua (shale)	6290.00	6234.00	6370.00	6304.00	
Middlesex (shale)	6370.00	6304.00	6479.00	6388.00	
Burket (shale)	6479.00	6388.00	6506.00	6407.00	
Tully (ls)	6506.00	6407.00	6556.00	6441.00	
Mahantango (shale)	6556.00	6441.00	6790.00	6557.00	
Marcellus (shale)	6790.00	6557.00	NA	NA	GAS

CARL ROTTER OHI 10H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	5/25/2022	23,243	23,146	36
2	6/15/2022	23,112	22,932	36
3	6/15/2022	22,898	22,718	36
4	6/16/2022	22,685	22,505	36
5	6/16/2022	22,471	22,291	36
6	6/17/2022	22,258	22,078	36
7	6/18/2022	22,044	21,864	36
8	6/18/2022	21,830	21,650	36
9	6/19/2022	21,617	21,437	36
10	6/20/2022	21,403	21,223	36
11	6/20/2022	21,190	21,010	36
12	6/21/2022	20,976	20,796	36
13	6/21/2022	20,762	20,582	36
14	6/22/2022	20,549	20,369	36
15	6/22/2022	20,335	20,155	36
16	6/22/2022	20,122	19,942	36
17	6/23/2022	19,908	19,728	36
18	6/23/2022	19,694	19,514	36
19	6/23/2022	19,481	19,301	36
20	6/23/2022	19,267	19,087	36
21	6/24/2022	19,054	18,873	36
22	6/24/2022	18,840	18,660	36
23	6/24/2022	18,626	18,446	36
24	6/25/2022	18,413	18,233	36
25	6/25/2022	18,199	18,019	36
26	6/25/2022	17,985	17,805	36
27	6/25/2022	17,772	17,592	36
28	6/26/2022	17,558	17,378	36
29	6/26/2022	17,345	17,165	36
30	6/27/2022	17,131	16,951	36
31	6/27/2022	16,917	16,737	36
32	6/27/2022	16,704	16,524	36
33	6/28/2022	16,490	16,310	36
34	6/28/2022	16,277	16,097	36
35	6/28/2022	16,063	15,883	36
36	6/28/2022	15,849	15,669	36
37	6/28/2022	15,636	15,456	36
38	6/29/2022	15,422	15,242	36
39	6/29/2022	15,209	15,025	36
40	6/29/2022	14,995	14,815	36
41	6/30/2022	14,781	14,601	36
42	6/30/2022	14,568	14,388	36
43	6/30/2022	14,354	14,174	36

CARL ROTTER OHI 10H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	6/30/2022	14,141	13,961	36
45	7/1/2022	13,927	13,747	36
46	7/2/2022	13,713	13,533	36
47	7/2/2022	13,500	13,320	36
48	7/2/2022	13,286	13,106	36
49	7/2/2022	13,073	12,893	36
50	7/2/2022	12,859	12,679	36
51	7/3/2022	12,645	12,465	36
52	7/3/2022	12,432	12,252	36
53	7/3/2022	12,218	12,038	36
54	7/4/2022	12,005	11,825	36
55	7/4/2022	11,791	11,611	36
56	7/4/2022	11,577	11,397	36
57	7/4/2022	11,364	11,184	36
58	7/4/2022	11,150	10,970	36
59	7/5/2022	10,937	10,757	36
60	7/5/2022	10,718	10,543	36
61	7/5/2022	10,509	10,329	36
62	7/6/2022	10,296	10,116	36
63	7/6/2022	10,082	9,902	36
64	7/6/2022	9,868	9,688	36
65	7/6/2022	9,655	9,475	36
66	7/7/2022	9,441	9,261	36
67	7/7/2022	9,228	9,048	36
68	7/7/2022	9,014	8,834	36
69	7/7/2022	8,800	8,620	36
70	7/7/2022	8,587	8,407	36
71	7/8/2022	8,373	8,193	36
72	7/8/2022	8,160	7,980	36
73	7/8/2022	7,946	7,766	36
74	7/8/2022	7,732	7,552	36
75	7/8/2022	7,519	7,339	36
76	7/9/2022	7,305	7,125	36
77	7/9/2022	7,092	6,912	36

CARL ROTTER OHI 10H

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	6/15/2022	97.1	10,110	7,965	4,895	183,650	5,382	0
2	6/15/2022	92	9,761	7,309	5,155	353,490	8,937	0
3	6/16/2022	89.9	9,676	6,488	5,865	350,820	8,994	0
4	6/16/2022	92.5	9,757	5,790	4,469	356,350	9,502	0
5	6/17/2022	84.4	8,866	5,762	4,751	357,450	10,937	0
6	6/17/2022	92.5	9,376	5,753	4,542	358,590	9,077	0
7	6/18/2022	96	10,040	7,109	5,208	353,800	8,471	0
8	6/19/2022	94.2	10,062	6,503	4,426	355,560	8,550	0
9	6/20/2022	93.7	10,139	6,952	4,322	358,910	8,598	0
10	6/20/2022	94.6	9,723	7,029	4,693	366,270	8,621	0
11	6/21/2022	90.8	9,812	5,985	4,554	355,220	9,307	0
12	6/21/2022	89.7	9,103	6,452	4,623	359,800	8,495	0
13	6/21/2022	91.9	9,290	5,350	4,347	353,910	8,496	0
14	6/22/2022	87.8	9,299	6,033	4,621	357,380	8,633	0
15	6/22/2022	91.5	9,351	5,962	4,813	357,070	8,484	0
16	6/23/2022	95.3	9,915	6,592	4,930	359,580	8,077	0
17	6/23/2022	95.5	9,474	5,832	4,231	357,150	7,876	0
18	6/23/2022	92.5	9,426	6,034	4,221	357,470	7,838	0
19	6/23/2022	97.4	9,712	6,335	4,768	358,370	7,795	0
20	6/24/2022	92.1	9,293	6,135	4,550	357,180	7,791	0
21	6/24/2022	95.5	9,319	6,293	4,087	357,930	7,761	0
22	6/24/2022	97.1	9,523	6,317	4,535	360,570	7,779	0
23	6/24/2022	96.2	9,608	6,383	4,574	357,730	7,653	0
24	6/25/2022	98.7	9,641	6,238	4,671	356,860	7,896	0
25	6/25/2022	97.4	9,637	6,312	4,290	357,660	7,873	0
26	6/25/2022	93.3	9,236	6,022	4,680	357,200	7,076	0
27	6/26/2022	95.5	9,326	6,431	4,523	359,860	8,073	0
28	6/26/2022	99.1	9,425	6,297	4,390	368,390	7,758	0
29	6/27/2022	94.7	9,436	6,367	5,230	357,249	7,750	0
30	6/27/2022	98.5	9,346	6,482	4,479	357,310	7,575	0
31	6/27/2022	97.6	9,554	6,498	4,890	353,640	7,383	0
32	6/27/2022	95.5	9,570	6,185	5,063	352,500	7,618	0
33	6/28/2022	97.8	9,146	6,524	4,467	358,440	7,379	0
34	6/28/2022	97	8,958	6,113	4,689	358,290	7,286	0
35	6/28/2022	98.6	8,997	6,418	4,765	361,880	7,420	0
36	6/28/2022	93.9	9,193	6,309	4,703	360,480	7,546	0
37	6/28/2022	94.2	8,771	6,172	5,130	362,460	7,554	0
38	6/29/2022	98.2	9,045	5,997	4,578	362,730	7,365	0
39	6/29/2022	96	8,756	6,141	4,855	360,840	7,614	0
40	6/30/2022	97.2	8,587	5,390	5,120	363,480	7,801	0
41	6/30/2022	97.8	8,609	6,605	4,789	363,440	7,661	0
42	6/30/2022	98.2	8,834	6,342	5,013	365,180	7,414	0
43	6/30/2022	94.8	8,846	6,382	5,155	358,140	7,560	0
44	7/1/2022	96.1	8,779	6,579	5,400	290,130	9,880	0
45	7/1/2022	94	8,554	6,450	5,311	356,100	7,690	0
46	7/2/2022	98.6	8,344	6,319	4,769	363,310	7,489	0
47	7/2/2022	99.5	8,514	5,758	4,789	355,240	7,247	0
48	7/2/2022	99.5	8,610	6,235	5,300	353,850	7,098	0
49	7/2/2022	94.7	9,161	6,275	5,070	337,560	6,897	0
50	7/3/2022	95.2	8,918	6,011	4,920	359,850	7,406	0
51	7/3/2022	99	8,697	6,445	4,789	359,380	7,277	0
52	7/3/2022	98.5	8,647	5,759	4,689	335,220	6,752	0
53	7/3/2022	94.8	8,301	6,239	5,352	358,270	7,335	0

CARL ROTTER OHI 10H

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	7/4/2022	93.8	8,162	6,308	5,134	363,220	7,261	0
55	7/4/2022	98.4	7,989	6,780	4,709	358,640	7,200	0
56	7/4/2022	99.1	8,256	6,575	4,590	356,470	7,210	0
57	7/4/2022	94.3	8,126	6,255	5,346	352,800	7,139	0
58	7/5/2022	94.2	8,031	6,130	5,163	360,690	7,491	0
59	7/5/2022	99	8,155	6,708	4,689	364,520	7,087	0
60	7/5/2022	81.5	6,725	6,350	4,867	360,330	7,164	0
61	7/6/2022	96.3	7,827	6,152	4,789	356,610	7,172	0
62	7/6/2022	100	7,755	5,116	5,258	358,200	7,157	0
63	7/6/2022	99	7,630	6,042	5,145	357,280	6,788	0
64	7/6/2022	99.4	7,462	6,215	4,896	361,430	7,120	0
65	7/6/2022	100	7,277	5,883	4,829	363,590	7,300	0
66	7/7/2022	99	7,255	4,478	4,653	353,180	7,078	0
67	7/7/2022	100.8	7,566	6,250	5,166	357,220	6,956	0
68	7/7/2022	100.8	7,413	5,998	5,125	353,000	6,908	0
69	7/7/2022	99.8	7,035	5,941	4,544	353,820	6,987	0
70	7/8/2022	99	7,062	6,164	4,757	359,280	7,014	0
71	7/8/2022	99	7,060	6,002	5,125	358,030	7,060	0
72	7/8/2022	100	6,945	6,125	5,325	358,480	6,851	0
73	7/8/2022	84.1	7,008	5,828	5,125	360,290	6,859	0
74	7/8/2022	100	6,802	6,835	4,688	355,760	6,959	0
75	7/9/2022	100	6,848	6,241	4,536	356,880	7,016	0
76	7/9/2022	84.8	6,712	6,548	5,426	352,290	6,847	0
77	7/9/2022	83.9	6,806	6,335	5,285	358,600	6,777	0

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/15/2022
Job End Date:	7/9/2022
State:	West Virginia
County:	Ohio
API Number:	47-069-00328-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	CARL ROTTER OHI 10
Latitude:	40.10155345
Longitude:	-80.54251075
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,706
Total Base Water Volume (gal):	24,669,726
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	87.95709	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.29328	

		Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	45.00000	0.00454	
		Sodium Erythorbate	6381-77-7	100.00000	0.00150	
		Quaternary ammonium compounds	68424-85-1	7.50000	0.00076	
		Ethanol	64-17-5	2.50000	0.00025	
		Ethylene glycol	107-21-1	40.00000	0.00017	
		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	
		Cinnamaldehyde	104-55-2	10.00000	0.00004	
		Isopropyl alcohol	67-63-0	5.00000	0.00002	
		2-Butoxyethanol	111-76-2	5.00000	0.00002	
		1-Decanol	112-30-1	5.00000	0.00002	
		1-Octanol	111-87-5	5.00000	0.00002	
		Triethyl phosphate	78-40-0	5.00000	0.00002	
		benzyl chloridequaternized	72480-70-7	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)

LATITUDE: 40°07'30" SURFACE HOLE (2000' SCALE) 305'

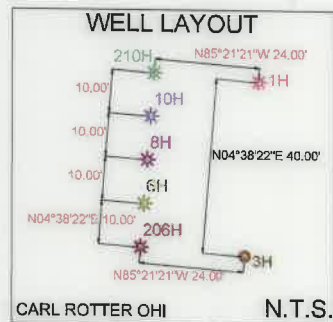
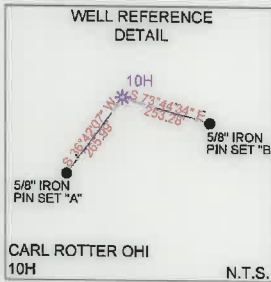
LATITUDE: 40°05'00" BOTTOM HOLE (2000' SCALE) 5218'



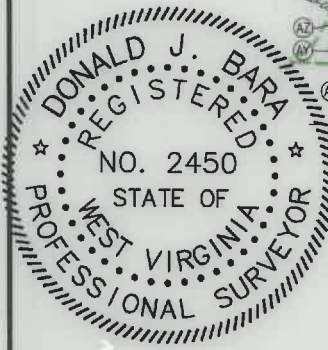
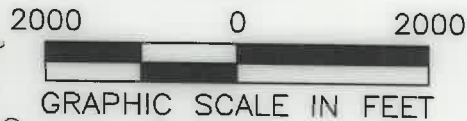
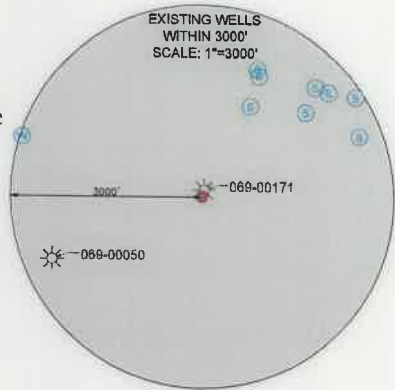
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

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.



LINE	BEARING	DISTANCE
L1	S36°52'31"W	1452.98'
L2	S31°16'38"W	1629.07'



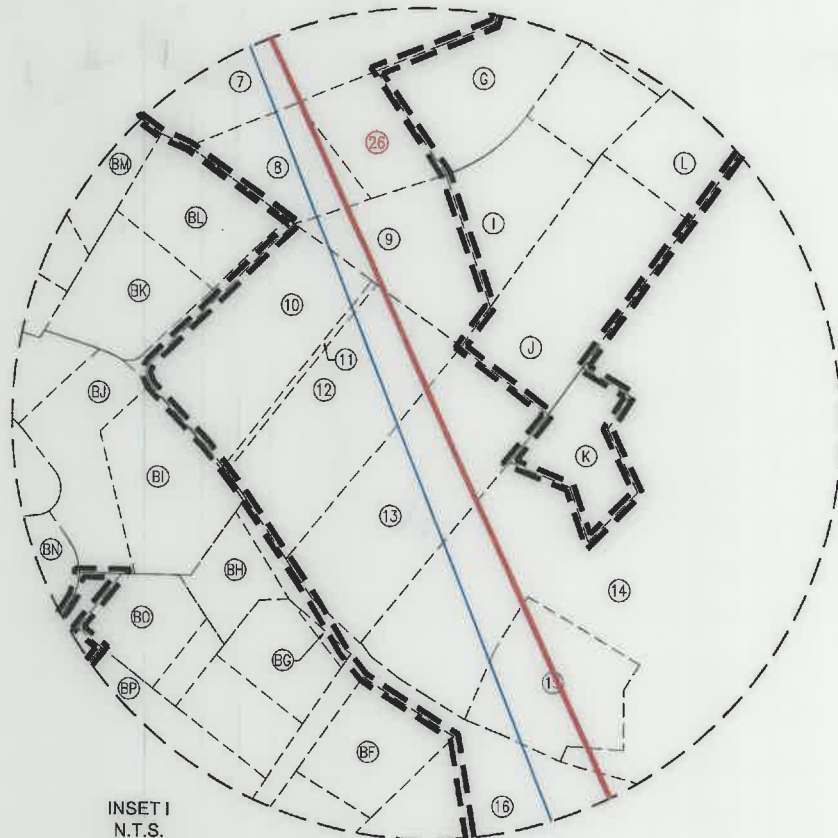
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439129.04 EASTING: 538993.31
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439099.83 EASTING: 539223.34
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4434514.52 EASTING: 541065.62
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439129.00 EASTING: 538993.29
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439114.62 EASTING: 539216.20
TURNING POINT LOCATION (TPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4436911.10 EASTING: 540223.32
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4434514.43 EASTING: 541066.05

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. 2450

COMPANY: **SWN** Production Company, LLC

<p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	CARL ROTTER OHI OPERATOR'S WELL #: 10H API WELL #: 47 069 00328 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"/>	WATERSHED: UPPER OHIO SOUTH DISTRICT: LIBERTY COUNTY: OHIO SURFACE OWNER: CARL J. & GRACE A. ROTTER OIL & GAS ROYALTY OWNER: CARL J. & GRACE A. ROTTER 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"/>
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	ESTIMATED DEPTH: 6,794' 10/21/2022	WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
DESIGNATED AGENT: BRITTANY WOODY ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	REVISIONS:	DATE: 08-12-2022 API NO: 47-069-00328 DRAWN BY: R. GRIMES SCALE: 1" = 2000' DRAWING NO: 2018-0153 WELL LOCATION PLAT



WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	ROTTER CARL J & GRACE A (S/R)	3-111-54
2	GRIFFITH SHARON & WARREN	3-111-60.1
3	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS	REALTREE RD., FKA TRESTLEWORK ROGERS RD., AKA ROGERS ROAD
4	KLAGES LLOYD A JR.	3-111-46.18
5	POWERS JEFFREY B	3-111-46.20
6	KLAGES PROPERTIES LLC	3-111-46.9
7	WOLEN JOHN J & MICHELLE L	3-111-46.11
8	TUNNEL RIDGE LLC	3-111-46.13
9	JSNE LLC (LOT 2)	3-111-46.8
10	KOSOL JOSEPH JOHN JR., & LAURA JEAN	3-111-48.4
11	TUNNEL RIDGE LLC	3-111-48.5
12	TUNNEL RIDGE LLC	3-111-48.2
13	TUNNEL RIDGE LLC	3-114-54
14	HALL ROBERT H. & LAURA L., HALL DAVID LEE & SANDRA SUE, PASCO THOMAS P. & MARY	3-115-1.1
15	WOOD BRENTON R & KELLY S	3-115-1.2
16	STATE OF WEST VIRGINIA, DEPARTMENT OF HIGHWAYS	INTERSTATE 70
17	PAGENDARM PATRICIA M.	3-115-2.2
18	MORGAN SALLY A	3-115-2.4
19	MORGAN SALLY A	3-115-2.8
20	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	6-T5-2
21	DAVIS JOHN RICHARD JR., DAVIS DEBRA L., DAVIS JOSEPH DAVID	6-T10-1
22	HORR DONNIE L., BRIGGS KAREN L., HORR GLENN B.	6-T10-4
23	HORR DONNIE L & MICHELLE	6-T10-4.1
24	LEMMON JOSHUA, LEMMON MORGAN ASHLEY, LEMMON WADE LEE	6-T10-10
25	MOORE THOMAS E	680-005-00-00-0002-00
26	TUNNEL RIDGE LLC	3-111-46.19

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
X	ERNEST LAWRENCE F & DEBORAH K	3-115-4.1
Y	OLIVER LUCAS B	3-115-4
Z	JEWETT CLARENCE G AND TRACY	3-115-4.2
AA	TUNNEL RIDGE LLC	3-115-4.6
AB	TUNNEL RIDGE LLC	3-115-4.4
AC	BRIGGS KAREN LYNN & HENRY WILLIAM	6-T10-4.2
AD	HORR DONNIE L & GLENN B & KAREN L BRIGGS,	680-005-00-00-0003-00
AE	HANCHER MATTHEW W,	680-005-00-00-0010-00
AF	DUNN WILLIAM C & SALLIE A,	680-005-00-00-0010-02
AG	BECK DONALD L SR & SANDRA E	680-005-00-00-0010-01
AH	SZAFRANIEC ANDREW D	680-005-00-00-0014-03
AI	HAGAN DAVID E & CLAIRE M FAMILY TR DAVID E & CLAIRE M HAGAN TRUSTEES	680-005-00-00-0001-01
AJ	HAGAN DAVID E & CLAIRE M FAMILY TR DAVID E & CLAIRE M HAGAN TRUSTEES	680-005-00-00-0001-00
AK	ALDERMAN ROY M	6-T10-11.4
AL	ALDERMAN ROY M	6-T10-11.6
AM	KRUPINSKI MARK	6-T10-5.6
AN	KRUPINSKI MARK D & JAN M	6-T10-5
AO	ASHTON BETH A JACOBS DOUGLAS E	6-T10-9
AP	RICHEY DONALD EDWARD JR RICHEY CHRISTINE	6-T10-5.9
AQ	WINESBURG J. MICHAEL	6-T10-5.4
AR	WILD LIFE LEAGUE OF OHIO CO	6-T5-2
AS	DAVIS JOHN R JR & ADA I	6-T5-6
AT	DAVIS JOHN RICHARD & ADA I	6-T5-2.3
AU	DAVIS JOHN RICHARD JR. & ADA I	6-T5-2.1
AV	GIVENS HERSCHEL L. & JONES DOROTHY S.	6-T5-2.2
AW	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	6-T5-1
AX	WEST VIRGINIA DEPT NAT RES	3-114-29
AY	NIETZELT EDWARD L	3-114-38
AZ	ERNEST KELLY MICHAEL	3-114-35
BA	ERNEST DEBORAH J	3-114-31.5
BB	ERNEST DEBORAH J	3-114-34
BC	TULLY JAMES M & VERONICA	3-114-31.1
BD	TULLY JAMES M	3-114-31.4
BE	TULLY JAMES M & VERONICA	3-114-31.2
BF	TUNNEL RIDGE, LLC	3-114-39
BG	NUNES ANDREW J	3-111-48.9
BH	MARKING JOHN E & TINA J	3-111-48.3
BI	OHIO RIVER COLLIERIES COMPANY (LOTS 1&2)	3-111-46.3
BJ	MOORE SCOTT E & LEAH (LOTS 3&5)	3-111-46.10
BK	TUNNEL RIDGE LLC	3-111-48.13
BL	TUNNEL RIDGE LLC	3-111-48.6
BM	TUNNEL RIDGE LLC (LOTS 21-23&25)	3-111-46.17
BN	HOMESTEAD FARMS LLC (LOTS 6-11&16-20)	3-111-46
BO	TUNNEL RIDGE, LLC	3-111-46.7
BP	HENDERSON DENNIS C & MURPHY PATRICIA A	3-114-53
BQ	TUNNEL RIDGE LLC	3-114-51
BR	TUNNEL RIDGE LLC	3-114-52.1
BS	DEAN LAWRENCE J II & JANET S	3-114-49
BT	WATSON GARY L	3-114-21
BU	HEINRICH EARNEST J. III & ANGELA R.	3-114-22
BV	WATSON GARY L	3-111-55.1
BW	WEASE DUANE L & RHONDA L	3-111-55.2
BX	DAVIS DONNA EVANS & WEASE RHONDA EVANS	3-111-49
BY	ROTTER C J & GRACE A	3-111-53
BZ	ROTTER C J & GRACE A	3-111-52
CA	DAVIS DONNA E & DANIEL R	3-111-50
CB	DAVIS DONNA EVANS & DANIEL R	3-111-49.2
CC	ROTTER CARL J & GRACE A	3-111-64
CD	SCHMIDT TODD R	3-111-46.22
CE	DAVIS DEBRA L	6-T5-5

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	NOLAN JOHN A JR	3-111-61
B	TUNNEL RIDGE LLC	3-112-32
C	WATKINS THERESA & MARK	3-111-60
D	TUNNEL RIDGE LLC	3-112-25
E	JSNE LLC (LOT15)	3-111-46.8
F	TUNNEL RIDGE LLC	3-111-46.2
G	JSNE LLC (LOTS 5,7,9,11)	3-111-46.8
H	REMOVED	REMOVED
I	TUNNEL RIDGE LLC	3-111-46.12
J	TUNNEL RIDGE LLC	3-111-48.1
K	TUNNEL RIDGE LLC	3-115-7
L	KLAGES LLOYD A JR & AMY	3-111-48.10
M	KLAGES LLOYD A JR & AMY	3-112-30
N	TUNNEL RIDGE LLC	3-112-18.1
O	TUNNEL RIDGE LLC	3-112-18.2
P	TRIPLE P LLC	3-112-18
Q	TURNER FRANCES A	3-112-18.6
R	TRIPLE P LLC	3-112-18.8
S	TRIPLE P LLC	3-112-18.9
T	BERGHOFF BRAD W	3-115-2.9
U	BERGHOFF GERALD W	3-115-2.6
V	GYEKIS ROBERT J & VICKI L	3-115-2.3
W	ERNEST LAWRENCE F & DEBORAH	3-115-3

REVISIONS:	COMPANY: SWN Production Company, LLC		DATE: 08-12-2022	
	OPERATOR'S: CARL ROTTER OHI		API NO: 47-069-00328	
	WELL #: 10H		DRAWN BY: R. GRIMES	
	DISTRICT: LIBERTY	COUNTY: OHIO	STATE: WV	SCALE: N/A
				DRAWING NO: 2018-0153
				WELL LOCATION PLAT