

Via Federal Express

August 29, 2022

State of West Virginia
Department of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RECEIVED
Office of Oil and Gas
AUG 30 2022
WV Department of
Environmental Protection

RE: SWN Production Company, LLC
Operator ID: 494512924
Regulatory Filings: WR-34, WR-35, and WR-36

To Whom It May Concern:

Please find enclosed forms WR-34 Discharge Monitoring Report and WR-35 Well Operator's Report of Well Work along with supporting documentation, for the wells listed below.

API	Well Name
47-069-00327	CARL ROTTER OHI 6H
47-069-00330	CARL ROTTER OHI 8H
47-069-00328	CARL ROTTER OHI 10H
47-069-00329	CARL ROTTER OHI 206H
47-069-00331	CARL ROTTER OHI 210H

Also included are WR-36 Well Operator's Report of Initial Gas-Oil Ratio for the wells for the following:

API	Well Name
47-069-00330	CARL ROTTER OHI 8H

If you have any questions or require additional information, please contact me via email at denise_grantham@swn.com or telephone at (832) 796-6139.

Sincerely,

Denise Grantham

Denise Grantham
Regulatory Analyst
SW Appalachia Division

/dg
Encl.

$\frac{R^2}{A} \rightarrow V^+$

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

API 47 - 069 - 00327 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 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 4,439,122.93 Easting 538,992.95
Landing Point of Curve Northing 4,438,924.38 Easting 538,699.51
Bottom Hole Northing 4,435,396.15 Easting 540,159.65

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 12/21/2020 Date drilling commenced 3/16/2022 Date drilling ceased 3/29/2022

Date completion activities began 6/1/2022 Date completion activities ceased 7/25/2022

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 722' Cavern(s) encountered (Y/N) depths N

Is coal being mined in area (Y/N) N

APPROVED
Reviewed by: [Signature] 10/6/2022
10/21/2022

API 47-069 - 00327 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 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	136	NEW	J-55/94#		Y
Surface	17.5	13.375	767	NEW	J-55/54.5#		Y; 47 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2,200	NEW	J-55/36#		Y; 37 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	19,609	NEW	P-110 HP/20#		N
Tubing		2.875	7,146	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	787	15.60	1.20	944.4	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	807	15.60	1.19	960.33	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,442	14.50	1.29	4,440.18	1,097'	24
Tubing							

Drillers TD (ft) 19,609' Loggers TD (ft) 19,609'
 Deepest formation penetrated MARCELLUS Plug back to (ft) 19,647'
 Plug back procedure N/A

Kick off depth (ft) 5,884'

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: 390 CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

API 47- 069 - 00327 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 6H

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 - 00327 Farm name CARL J. & GRACE A. ROTTER Well number CARL ROTTER OHI 6H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>6,548</u> TVD	<u>6,882</u> MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,908 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 1,517 mcfpd Oil 136 bpd NGL _____ bpd Water 438 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

Please insert additional pages as applicable.

Drilling Contractor SWN DRILLING COMPANY
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Logging Company BAKER HUGHES
Address 9110 GROGANS MILL 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



Well Name: Carl Rotter OHI 6H

47069003270000

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	722.00	722.00	727.00	727.00	
Pottsville (ss)	840.00	840.00	989.00	989.00	
Raven Cliff (ss)	1215.00	1214.00	1474.00	1467.00	
Maxton (ss)	1647.00	1637.00	1901.00	1884.00	
Big Injun (ss)	1901.00	1884.00	2198.00	2172.00	
Berea (siltstone)	2402.00	2369.00	2499.00	2464.00	
Rhinestreet (shale)	6058.00	5936.00	6374.00	6227.00	
Cashaqua (shale)	6374.00	6227.00	6458.00	6297.00	
Middlesex (shale)	6458.00	6297.00	6564.00	6377.00	
Burket (shale)	6564.00	6377.00	6595.00	6398.00	
Tully (ls)	6595.00	6398.00	6650.00	6434.00	
Mahantango (shale)	6650.00	6434.00	6882.00	6548.00	
Marcellus (shale)	6882.00	6548.00	NA	NA	GAS

**CARL ROTTER OHI 6H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	5/30/2022	19,467	19,417	24
2	6/2/2022	19,383	19,206	36
3	6/2/2022	19,173	18,996	36
4	6/3/2022	18,963	18,786	36
5	6/3/2022	18,753	18,575	36
6	6/3/2022	18,542	18,365	36
7	6/3/2022	18,332	18,155	36
8	6/4/2022	18,122	17,945	36
9	6/4/2022	17,912	17,735	36
10	6/4/2022	17,702	17,525	36
11	6/4/2022	17,492	17,314	36
12	6/4/2022	17,281	17,104	36
13	6/5/2022	17,071	16,894	36
14	6/5/2022	16,861	16,684	36
15	6/5/2022	16,651	16,474	36
16	6/5/2022	16,441	16,264	36
17	6/6/2022	16,231	16,054	36
18	6/6/2022	16,021	15,843	36
19	6/6/2022	15,810	15,633	36
20	6/6/2022	15,600	15,423	36
21	6/6/2022	15,390	15,213	36
22	6/7/2022	15,180	15,003	36
23	6/7/2022	14,970	14,793	36
24	6/7/2022	14,760	14,582	36
25	6/7/2022	14,549	14,372	36
26	6/7/2022	14,339	14,162	36
27	6/7/2022	14,129	13,952	36
28	6/8/2022	13,919	13,742	36
29	6/8/2022	13,709	13,532	36
30	6/8/2022	13,499	13,322	36
31	6/8/2022	13,289	13,111	36
32	6/8/2022	13,078	12,901	36
33	6/9/2022	12,868	12,691	36
34	6/9/2022	12,658	12,481	36
35	6/9/2022	12,448	12,271	36
36	6/9/2022	12,238	12,061	36
37	6/10/2022	12,028	11,850	36
38	6/10/2022	11,817	11,640	36
39	6/10/2022	11,607	11,430	36
40	6/10/2022	11,397	11,220	36
41	6/10/2022	11,187	11,010	36
42	6/11/2022	10,977	10,800	36
43	6/11/2022	10,767	10,590	36

**CARL ROTTER OHI 6H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	6/11/2022	10,557	10,379	36
45	6/11/2022	10,346	10,169	36
46	6/11/2022	10,136	9,959	36
47	6/12/2022	9,926	9,749	36
48	6/12/2022	9,716	9,539	36
49	6/12/2022	9,506	9,329	36
50	6/12/2022	9,296	9,118	36
51	6/13/2022	9,085	8,908	36
52	6/13/2022	8,875	8,698	36
53	6/13/2022	8,665	8,488	36
54	6/13/2022	8,455	8,278	36
55	6/13/2022	8,245	8,068	36
56	6/14/2022	8,035	7,858	36
57	6/14/2022	7,825	7,647	36
58	6/14/2022	7,614	7,437	36
59	6/14/2022	7,404	7,227	36
60	6/14/2022	7,194	7,017	36

CARL ROTTER OHI 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/other
1	6/2/2022	85.6	9,665	8,754	4,114	180,180	5,393	0
2	6/2/2022	82.5	8,286	5,543	4,321	361,430	11,123	0
3	6/3/2022	98.1	8,857	5,580	4,450	358,260	9,628	0
4	6/3/2022	95.1	9,442	5,360	4,564	360,380	8,541	0
5	6/3/2022	85.6	8,445	4,863	4,423	359,800	9,910	0
6	6/3/2022	97.9	9,446	4,832	4,436	350,200	8,225	0
7	6/4/2022	98.1	9,739	6,620	4,385	347,120	8,264	0
8	6/4/2022	93.2	9,458	5,609	4,660	352,380	8,112	0
9	6/4/2022	94.1	9,501	6,325	4,573	355,720	8,372	0
10	6/4/2022	89	9,546	6,347	4,453	353,880	8,453	0
11	6/4/2022	97.6	9,197	6,637	4,510	350,690	8,113	0
12	6/4/2022	97.2	9,227	6,391	4,671	353,180	8,161	0
13	6/5/2022	98.3	9,369	6,700	4,503	351,980	8,099	0
14	6/5/2022	95.1	9,209	5,880	4,169	358,460	8,315	0
15	6/5/2022	93.7	9,383	5,873	4,198	356,160	8,128	0
16	6/5/2022	84.6	8,388	6,486	4,630	352,180	10,292	0
17	6/6/2022	97.8	9,262	6,294	4,078	353,380	8,233	0
18	6/6/2022	91.7	8,920	6,178	4,062	355,880	8,040	0
19	6/6/2022	85.6	8,661	6,408	4,357	356,480	7,995	0
20	6/6/2022	98.2	9,173	6,588	4,602	357,830	8,195	0
21	6/6/2022	98.6	9,073	6,290	4,456	360,360	8,108	0
22	6/7/2022	98.6	9,201	6,145	4,087	356,660	8,081	0
23	6/7/2022	95.7	8,956	6,158	4,353	358,420	8,048	0
24	6/7/2022	95.5	8,894	6,154	4,618	355,656	8,084	0
25	6/7/2022	95.7	8,874	6,620	4,794	352,320	7,883	0
26	6/7/2022	90.7	8,503	6,453	4,126	358,260	8,097	0
27	6/7/2022	94.9	8,390	6,038	4,123	356,786	8,034	0
28	6/8/2022	99	8,705	5,546	4,230	356,140	8,038	0
29	6/8/2022	86.2	7,698	4,995	4,260	352,040	7,930	0
30	6/8/2022	95.3	8,456	6,362	3,758	356,828	7,983	0
31	6/8/2022	95.2	8,504	5,116	4,386	357,234	7,954	0
32	6/8/2022	98.1	8,142	6,120	4,730	355,660	8,014	0
33	6/9/2022	99.7	8,206	6,565	5,025	351,550	7,923	0
34	6/9/2022	91	8,247	6,464	3,766	357,080	7,973	0
35	6/9/2022	95.1	8,570	6,459	4,785	354,080	7,801	0
36	6/10/2022	95	8,246	5,247	5,535	357,170	7,894	0
37	6/10/2022	95.1	8,369	6,569	4,350	352,430	7,837	0
38	6/10/2022	95.6	8,212	7,278	4,812	357,430	7,762	0
39	6/10/2022	95.2	7,955	6,755	5,062	359,280	7,846	0
40	6/10/2022	99	7,876	6,197	5,110	351,480	7,787	0
41	6/11/2022	100.9	8,061	6,245	4,985	359,840	7,934	0
42	6/11/2022	95	8,006	5,830	7,800	358,880	8,081	0
43	6/11/2022	90.2	7,125	6,592	4,365	356,180	7,671	0
44	6/11/2022	95.2	8,103	6,440	5,128	350,930	7,552	0
45	6/11/2022	100	7,800	5,656	4,202	350,170	7,964	0
46	6/11/2022	98.8	7,672	7,522	4,282	353,610	7,812	0
47	6/12/2022	96	7,599	6,370	5,079	352,460	7,775	0
48	6/12/2022	95	7,547	6,448	4,520	359,010	7,890	0
49	6/12/2022	95.5	7,434	6,315	4,560	357,110	7,517	0
50	6/12/2022	100	7,300	6,229	4,295	350,240	8,712	0
51	6/13/2022	95.1	7,527	6,466	4,079	356,210	7,625	0
52	6/13/2022	90.1	6,647	6,881	4,204	352,730	7,811	0
53	6/13/2022	95.4	7,590	6,146	4,385	350,970	7,341	0

CARL ROTTER OHI 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
54	6/13/2022	100	7,022	6,428	4,587	354,350	7,747	0
55	6/13/2022	99.9	7,045	6,021	4,392	353,780	7,644	0
56	6/14/2022	95.4	7,003	5,972	4,700	355,480	7,145	0
57	6/14/2022	95.6	6,979	6,124	4,587	352,320	7,131	0
58	6/14/2022	95.5	6,916	6,450	4,541	356,700	7,324	0
59	6/14/2022	99.9	6,802	5,704	4,506	361,010	7,654	0
60	6/14/2022	100	6,798	5,116	4,850	359,260	7,612	0

Hydraulic Fracturing Fluid Product Component Information Disclosure

RECEIVED
Office of Oil and Gas
AUG 30 2022
WV Department of
Environmental Protection

Job Start Date:	6/2/2022
Job End Date:	6/14/2022
State:	West Virginia
County:	Ohio
API Number:	47-069-00327-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	CARL ROTTER OHI 6
Latitude:	40.10149846
Longitude:	-80.54251530
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,668
Total Base Water Volume (gal):	20,231,312
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	88.63455	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.20044	

			Water	7732-18-5	45.00000	0.20044	
			Water	7732-18-5	100.00000	0.20044	
Sand	SWN Well Services	Proppant					
			Listed Below				
Plexsick 930	SWN Well Services	Friction Reducer					
			Listed Below				
FSTI-GI-02	SWN Well Services	Corrosion Inhibitor					
			Listed Below				
HCL	SWN Well Services	Solvent					
			Listed Below				
Tolicide 4Frac	SWN Well Services	Biocide					
			Listed Below				
Plexaid 655NM	SWN Well Services	Scale Inhibitor					
			Listed Below				
Ferplex 80	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	11.10026	
				Hydrochloric Acid	7647-01-0	0.02697	

		Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	45.00000	0.00457
		Sodium Erythorbate	6381-77-7	100.00000	0.00096
		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	0.00011
		N,N-Dimethylformamide	68-12-2	10.00000	0.00003
		Cinnamaldehyde	104-55-2	10.00000	0.00003
		Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)- .omega.-hydroxy-	9016-45-9	10.00000	0.00003
		2-Butoxyethanol	111-76-2	5.00000	0.00001
		Isopropyl alcohol	67-63-0	5.00000	0.00001
		1-Octanol	111-87-5	5.00000	0.00001
		1-Decanol	112-30-1	5.00000	0.00001
		benzyl chloridequaternized	72480-70-7	5.00000	0.00001
		Triethyl phosphate	78-40-0	5.00000	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)

LATITUDE: 40°07'30" SURFACE HOLE (2000' SCALE) 306'

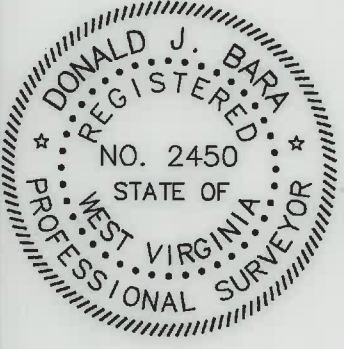
LATITUDE: 40°05'00" 8181' BOTTOM HOLE (2000' SCALE)

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.



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



SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439122.93 EASTING: 538992.95
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4438924.38 EASTING: 538699.51
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4435396.15 EASTING: 540159.65
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4439122.92 EASTING: 538992.90
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4438916.60 EASTING: 538702.18
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4435396.01 EASTING: 540159.62

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

(+) 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 GRADE GPS ELEVATION: (NAVD 88, US FT)

COMPANY: **swN** Production Company, LLC

CARL ROTTER OHI
OPERATOR'S WELL #: 6H
API WELL #: 47 069 00327
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1336.7'

DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: VALLEY GROVE, WV

SURFACE OWNER: CARL J. & GRACE A. ROTTER ACREAGE: ±77.45

OIL & GAS ROYALTY OWNER: CARL J. & GRACE A. ROTTER ACREAGE: ±77.45

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: 6,747' 10/21/2022

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY

ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201 ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201

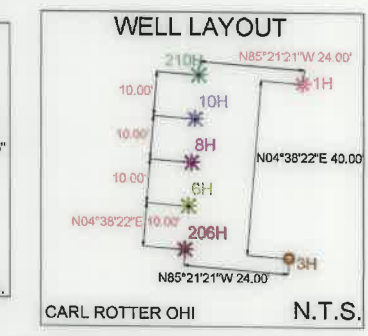
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:

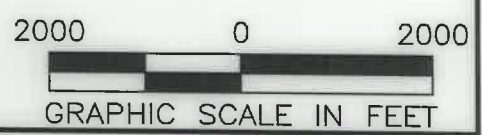
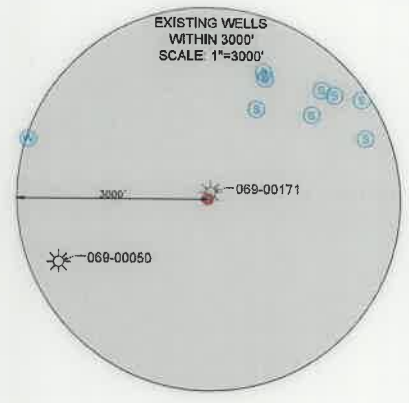
EXISTING BOTTOM HOLE	ACCESS ROAD
EXISTING / PRODUCING WELLHEAD	PUBLIC ROAD
EXISTING LANDING POINT LOCATION	FLOOD PLAIN
PROPOSED SURFACE HOLE / BOTTOM HOLE	LEASE BOUNDARY
PROPOSED LANDING POINT LOCATION	ASDRILLED PATH
	PROPOSED PATH

REVISIONS:

DATE: 08-12-2022
API NO: 47-069-00327
DRAWN BY: R. GRIMES
SCALE: 1" = 2000'
DRAWING NO: 2018-0153
WELL LOCATION PLAT



LINE	BEARING	DISTANCE
L1	S37°05'13"W	1444.53'
L2	S31°26'09"W	1620.13'

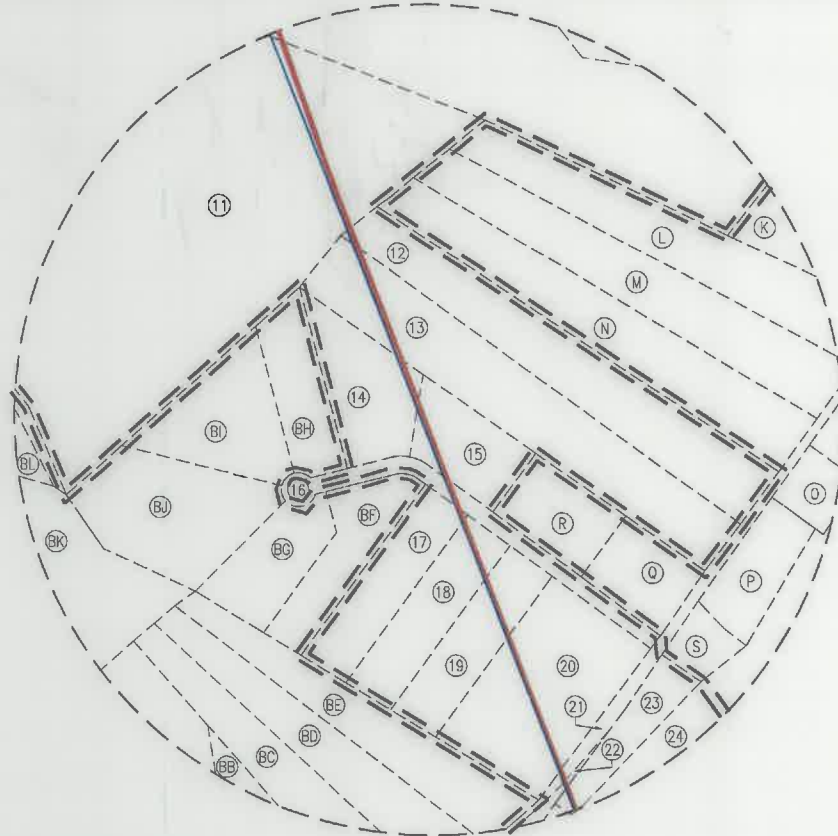


5683'

8557'

LONGITUDE: 80°30'00" BOTTOM HOLE (2000' SCALE)

LONGITUDE: 80°32'30" SURFACE HOLE (2000' SCALE)



INSET I
N.T.S

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-L11-54
2	NOLAN JOHN A JR	3-L11-61
3	ROTTER CARL J & GRACE A	3-L11-64
4	DAVIS DONNA EVANS & WEASE RHONDA	3-L11-49
5	DAVIS DONNA EVANS & DANIEL R	3-L11-49.2
6	DAVIS DONNA EVANS & DANIEL R	3-L11-50
7	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	TRESTLEWORK ROGERS RD
8	ROTTER CARL J & GRACE A	3-L11-52
9	ROTTER CARL J & GRACE A	3-L11-53
10	KLAGES LLOYD A JR	3-L11-46.18
11	DEAN LAWRENCE J II & JANET S	3-L14-49
12	TUNNEL RIDGE LLC	3-L14-52.24
13	TUNNEL RIDGE LLC	3-L14-52.26
14	TUNNEL RIDGE LLC	3-L14-52.33
15	RINE JAROD D ESTATE; RINE LARRY G, ADMINISTRATER	3-L14-52.31
16	THISTLE ESTATES HOMOWNERS' ASSOCIATION INC	3-L14-52.37
17	SMITH WESLEY D & BETTY A	3-L14-52.35
18	TUNNEL RIDGE LLC	3-L14-52.41
19	TUNNEL RIDGE LLC	3-L14-52.40
20	MEGALE WILLIAM N & LUNDA L	3-L14-52
21	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	STOOLFIRE/WEST ALEXANDER ROAD
22	TUNNEL RIDGE LLC	3-L14-33
23	TUNNEL RIDGE LLC	3-L14-48
24	STATE OF WEST VIRGINIA DEPARTMENT OF HIGHWAYS	INTERSTATE 70
25	BLAZIER ROBERT BRENT	3-L14-31
26	HOCKENBERRY JAMES MICHAEL	3-L14-31.7
27	HOCKENBERRY JAMES MICHAEL	3-L14-31.3
28	GARRETT JOHN W & CHRISTINA	3-L14-37
29	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	3-L14-29
30	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	6-T5-1
31	WILD LIFE LEAGUE OF OHIO CO	6-T10-2

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	GRIFFITH SHARON & WARREN	3-L11-60.1
B	SCHMIDT TODDR	3-L11-46.22
C	POWERS JEFFREY B	3-L11-46.20
D	KLAGES PROPERTIES LLC	3-L11-46.9
E	WOLEN JOHN J & MICHELLE L	3-L11-46.11
F	HOMESTEAD FARMS LLC	3-L11-46
G	MOORE SCOTT E & LEAH	3-L11-46.10
H	OHIO RIVER COLLIERIES COMPANY	3-L11-46.3
I	TUNNEL RIDGE LLC	3-L11-46.7
J	HENDERSON DENNIS C & MURPHY PATRICIA A	3-L14-53
K	TUNNEL RIDGE LLC	3-L14-51
L	TUNNEL RIDGE LLC	3-L14-52.1
M	CAROLIA FRANK A JR	3-L14-52.2
N	TUNNEL RIDGE LLC	3-L14-52.3
O	ACKLEY MARC & STACEY LYNN	3-L14-45
P	YENSEN HAROLD A JR & G L	3-L14-46
Q	TUNNEL RIDGE LLC	3-L14-52.28
R	TUNNEL RIDGE LLC	3-L14-52.29
S	SASEEN MARGARET LOUISE & SASEEN LOUIS CHRISTOPHER	3-L14-47
T	TULLY JAMES M & VERONICA	3-L14-31.2
U	TULLY JAMES M & VERONICA	3-L14-31.1
V	GARRETT JOHN W & CHRISTINA M	3-L14-31.6
W	ERNEST DEBORAH J	3-L14-31.5

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
X	ERNEST KELLY MICHAEL	3-L14-35
Y	GARRETT JOHN W & CHRISTINA	3-L14-36
Z	NIETZEL EDWARD L	3-L14-38
AA	PAGENDARM PATRICIA M	3-L15-2.2
AB	WEST VIRGINIA DIVISION OF NATURAL RESOURCES	6-T5-2
AC	JONES DOROTHY S & GIVENS H L	6-T5-2.2
AD	DAVIS JOHN R & ADA I	6-T5-2.1
AE	DAVIS JOHN R & A I	6-T5-2.3
AF	DAVIS JOHN R JR & ADA I	6-T5-6
AG	DAVIS JOHN RICHARD ET AL	6-T10-1
AH	WINESBURG MICHAEL J	6-T10-5.4
AI	PHILLIPS VANCE A & BRIANNE L	6-T10-5.5
AJ	NICK CLINTON W & JENNIFER M	6-T10-5.2
AK	NICK GREGORY W & E I	6-T10-5.1
AL	HAUGHT RANDY T & BRITTANY L	6-T10-5.7
AM	KRUPINSKI MARK D & PATTISHALL JAN M.	6-T10-5.6
AN	STRAWN REX M & BETH ANN	6-T10-11.2
AO	SLUGAR DAVID B & EASTER A	6-T10-7
AP	MCDONALD MICHAEL W & VALERIE R	6-T9-51
AQ	MCDONALD ZACHARY MICHAEL	6-T9-51.2
AR	KOZIK JOHN A & JAMES E	6-T9-49
AS	KOZIK JOHN A & CHERYL A	6-T10-12
AT	RIGGLE PAUL; RIGGLE KIMBERLY	6-T9-48.5
AU	DAGUE FREDERICK W	6-T9-48
AV	ADAMS CAROLE JOYCE	6-T4-8
AW	ADAMS THOMAS E & AMANDA BAKER	6-T4-8.1
AX	LEWTON TIMOTHY M ET AL LEWTON FREDERICK M - LE	6-T4-10
AY	LEWTON SUE ANN	6-T4-10.1
AZ	BLAZIER BETH ANN	3-L14-27.31
BA	TUNNEL RIDGE LLC	3-L14-32
BB	DALBO PATRICIA E	3-L14-52.6
BC	KNICELY GERALD L & JO ANN; TR 2009 KNICELY FAMILY IRR TRUST	3-L14-52.20
BD	WINTERS ROBERT E	3-L14-52.19
BE	HUNTLEY CHAD D & SUSAN L	3-L14-52.7
BF	SMITH WESLEY D & BETTY A	3-L14-52.36
BG	SMITH WESLEY DALE & BETTY ANN	3-L14-52.38
BH	TUNNEL RIDGE LLC	3-L14-52.32
BI	TUNNEL RIDGE LLC	3-L14-52.34
BJ	SMITH WESLEY DALE; BETTY ANN	3-L14-52.39
BK	TUNNEL RIDGE LLC	3-L14-24.1
BL	DEAN LAWRENCE J II & M R	3-L14-24.4
BM	SPEAKER BERNARD P & AMY L	3-L14-24.2
BN	KLEECH TAMI L	3-L14-23
BO	KLEECH TAMI L, KLEECH CHAD D & WATSON GARY	3-L14-23.1
BP	WATSON GARY L	3-L14-21
BQ	HEINRICH EARNEST J & ANGELA R	3-L14-22
BR	WATSON GARY L & ROSE	3-L11-55.1
BS	WEASE DUANE L & RHONDA L	3-L11-55.2
BT	WEASE DUANE L & RHONDA L	3-L11-58
BU	TUNNEL RIDGE LLC	3-L11-55
BV	DAVIS DANIEL R & DAVIS DONNA EVANS	3-L11-49.3
BW	TUNNEL RIDGE LLC	3-L11-49.1
BX	TUNNEL RIDGE LLC	3-L11-34.2
BY	TUNNEL RIDGE LLC	3-L11-56
BZ	TUNNEL RIDGE LLC	3-L11-34.1
CA	TUNNEL RIDGE LLC	3-L11-71
CB	ROTTER CARL J & GRACE A	3-L11-65
CC	NOLAN JOHN A JR	3-L11-66
CD	TUNNEL RIDGE LLC	3-L11-67

10/21/2022

REVISIONS:

COMPANY:			
OPERATOR'S		CARL ROTTER OHI	
WELL #:		6H	
DISTRICT:	LIBERTY	COUNTY:	OHIO
		STATE:	WV
		DATE:	08-12-2022
		API NO:	47-069-00327
		DRAWN BY:	R. GRIMES
		SCALE:	N/A
		DRAWING NO:	2018-0153
		WELL LOCATION PLAT	