

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

API 47-009-00333 County BROOKE/OHIO District CROSS CREEK
Quad STEUBENVILLE EAST Pad Name STATE OF WV DNR B-BRK-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR Well Number STATE OF WV DNR B BRK 401H
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 4,465,712.12 Easting 540,110.62
Landing Point of Curve Northing 4,465,786.46 Easting 539,483.41
Bottom Hole Northing 4,471,910.30 Easting 536,895.14

Elevation (ft) 1201.3' 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

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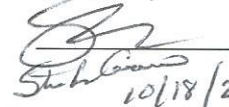
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Date permit issued 1/17/2023 Date drilling commenced 4/17/2023 Date drilling ceased 5/5/2023
Date completion activities began 6/9/2023 Date completion activities ceased 7/7/2023
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 543' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 693' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 135' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:


Steve Lewis
10/18/2023

API 47-009 - 00333

Farm name STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR

Well number STATE OF WV DNR B BRK 401H

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	629	NEW	J-55/54.5#	169.1 / 127.6	Y/ 7 BBLS
Coal	SEE SURFACE CASING						
Intermediate 1	12.25	9.625	1,484	NEW	J-55/36#		Y/ 30 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	28,466	NEW	P-110 HP/20#		N
Tubing		2.875	6,302	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	94 / 883	15.60	1.20 / 1.19	112.80 / 1,050.77	SURFACE	8
Coal							
Intermediate 1	CLASS A	566	15.60	1.19	673.54	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	5,597	14.50	1.29	7,220.13	1,700'	24
Tubing							

Drillers TD (ft) 28,466'

Loggers TD (ft) 28,466'

Deepest formation penetrated MARCELLUS

Plug back to (ft) 28,418'

Plug back procedure N/A

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Kick off depth (ft) 5,404 MD

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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: 9 CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: 19 CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: 611 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 _____

STATE OF WV DNR B BRK 401H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	6/3/2023	28,372	28,275	36
2	6/10/2023	28,241	28,063	36
3	6/10/2023	28,030	27,853	36
4	6/10/2023	27,819	27,642	36
5	6/10/2023	27,609	27,431	36
6	6/10/2023	27,398	27,220	36
7	6/11/2023	27,187	27,009	36
8	6/11/2023	26,976	26,798	36
9	6/12/2023	26,765	26,588	36
10	6/12/2023	26,554	26,377	36
11	6/12/2023	26,344	26,166	36
12	6/12/2023	26,133	25,955	36
13	6/13/2023	25,922	25,744	36
14	6/13/2023	25,711	25,534	36
15	6/13/2023	25,500	25,323	36
16	6/13/2023	25,290	25,112	36
17	6/14/2023	25,079	24,901	36
18	6/14/2023	24,868	24,690	36
19	6/14/2023	24,657	24,479	36
20	6/14/2023	24,446	24,269	36
21	6/14/2023	24,235	24,058	36
22	6/14/2023	24,025	23,847	36
23	6/15/2023	23,814	23,630	72
24	6/15/2023	23,603	23,425	36
25	6/15/2023	23,392	23,215	36
26	6/15/2023	23,181	23,004	36
27	6/16/2023	22,971	22,793	36
28	6/16/2023	22,760	22,582	36
29	6/16/2023	22,549	22,371	36
30	6/16/2023	22,338	22,160	36
31	6/17/2023	22,127	21,950	36
32	6/17/2023	21,916	21,739	36
33	6/17/2023	21,706	21,528	36
34	6/17/2023	21,495	21,317	36
35	6/17/2023	21,284	21,106	36
36	6/17/2023	21,073	20,896	36
37	6/18/2023	20,862	20,685	36
38	6/18/2023	20,652	20,474	36
39	6/18/2023	20,441	20,263	36
40	6/18/2023	20,230	20,052	36
41	6/18/2023	20,019	19,841	36
42	6/18/2023	19,808	19,631	36
43	6/19/2023	19,597	19,420	36

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PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	6/19/2023	19,387	19,209	36
45	6/19/2023	19,176	18,998	36
46	6/19/2023	18,965	18,787	72
47	6/19/2023	18,754	18,577	36
48	6/20/2023	18,543	18,366	36
49	6/20/2023	18,333	18,155	36
50	6/20/2023	18,122	17,944	36
51	6/20/2023	17,911	17,733	36
52	6/21/2023	17,700	17,522	36
53	6/21/2023	17,489	17,312	36
54	6/21/2023	17,279	17,101	36
55	6/21/2023	17,068	16,890	36
56	6/21/2023	16,857	16,679	36
57	6/22/2023	16,646	16,468	36
58	6/22/2023	16,435	16,258	36
59	6/22/2023	16,224	16,047	36
60	6/22/2023	16,014	15,836	36
61	6/22/2023	15,803	15,625	36
62	6/22/2023	15,592	15,414	36
63	6/23/2023	15,381	15,203	36
64	6/23/2023	15,170	14,993	36
65	6/23/2023	14,960	14,782	36
66	6/23/2023	14,749	14,571	36
67	6/23/2023	14,538	14,360	36
68	6/23/2023	14,327	14,149	36
69	6/23/2023	14,116	13,939	36
70	6/23/2023	13,905	13,728	36
71	6/23/2023	13,695	13,517	36
72	6/24/2023	13,484	13,306	36
73	6/24/2023	13,273	13,095	36
74	6/24/2023	13,062	12,884	36
75	6/24/2023	12,851	12,674	36
76	6/24/2023	12,641	12,463	36
77	6/24/2023	12,430	12,252	36
78	6/24/2023	12,219	12,041	36
79	6/25/2023	12,008	11,830	36
80	6/25/2023	11,797	11,620	36
81	6/25/2023	11,586	11,409	36
82	6/25/2023	11,376	11,198	36
83	6/25/2023	11,165	10,987	36
84	6/25/2023	10,954	10,776	36
85	6/25/2023	10,743	10,565	36
86	6/25/2023	10,532	10,355	36

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STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
87	6/25/2023	10,322	10,144	36
88	6/23/2023	10,111	9,933	36
89	6/26/2023	9,900	9,722	36
90	6/26/2023	9,689	9,511	36
91	6/26/2023	9,478	9,301	36
92	6/26/2023	9,267	9,090	36
93	6/26/2023	9,057	8,879	36
94	6/26/2023	8,846	8,668	36
95	6/26/2023	8,635	8,457	36
96	6/27/2023	8,424	8,246	36
97	6/27/2023	8,213	8,036	36
98	6/27/2023	8,003	7,825	36
99	6/27/2023	7,792	7,614	36
100	6/27/2023	7,581	7,403	36
101	6/27/2023	7,370	7,192	36
102	6/27/2023	7,159	6,982	36
103	6/27/2023	6,948	6,771	36
104	6/27/2023	6,738	6,560	36
105	6/27/2023	6,527	6,349	36

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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	6/9/2023	71.8	7,754	5,698	4,367	192,000	5,852	0
2	6/9/2023	88.1	8,660	4,972	4,695	367,500	14,259	0
3	6/10/2023	78.5	8,182	4,950	4,297	367,500	9,801	0
4	6/10/2023	82.3	8,493	5,156	4,152	367,500	9,602	0
5	6/10/2023	82.6	8,108	5,917	4,465	367,500	9,398	0
6	6/10/2023	91.7	8,938	5,061	4,450	367,500	9,417	0
7	6/11/2023	78.7	8,149	5,782	4,263	367,500	8,862	0
8	6/12/2023	85.2	8,448	4,659	4,372	367,500	9,033	0
9	6/12/2023	77	8,364	5,524	4,514	367,500	8,977	0
10	6/12/2023	85.9	8,886	5,243	4,752	367,500	9,195	0
11	6/12/2023	82.6	8,614	5,301	4,500	367,500	8,770	0
12	6/13/2023	77.3	8,036	5,962	4,151	367,500	8,815	0
13	6/13/2023	75.1	8,021	5,169	4,456	367,500	9,281	0
14	6/13/2023	76.3	8,343	5,249	4,352	367,500	7,808	0
15	6/13/2023	80.9	8,411	5,605	4,210	367,500	8,094	0
16	6/13/2023	80.5	8,349	5,749	4,423	367,500	7,987	0
17	6/14/2023	79	7,877	4,594	4,459	367,500	8,172	0
18	6/14/2023	76.9	8,162	5,763	4,406	367,500	7,908	0
19	6/14/2023	84.1	8,675	5,513	4,342	367,500	8,141	0
20	6/14/2023	88.7	8,904	5,595	4,652	367,500	8,095	0
21	6/14/2023	86.1	8,922	5,718	4,365	367,500	8,007	0
22	6/15/2023	89.4	8,801	4,792	3,829	368,000	8,200	0
23	6/15/2023	65.7	6,874	2,857	4,493	367,500	13,381	0
24	6/15/2023	84.4	8,173	5,511	4,315	367,500	8,276	0
25	6/15/2023	92.9	9,337	4,577	4,310	367,500	7,939	0
26	6/16/2023	86.5	8,788	5,401	5,122	367,500	9,795	0
27	6/16/2023	80	8,100	5,197	4,086	349,640	7,547	0
28	6/16/2023	79.7	8,100	5,418	4,520	367,500	7,599	0
29	6/16/2023	78.8	7,788	4,632	3,972	367,500	7,270	0
30	6/17/2023	82.9	7,772	5,621	4,512	367,500	7,667	0
31	6/17/2023	81.2	8,041	4,504	4,579	367,500	7,672	0
32	6/17/2023	79.4	8,058	5,284	4,426	339,320	7,450	0
33	6/17/2023	80.6	7,707	5,613	4,421	367,500	7,910	0
34	6/17/2023	73.5	7,245	5,466	4,609	342,058	7,398	0
35	6/17/2023	88.1	8,346	5,494	4,274	367,500	7,758	0
36	6/17/2023	84	7,763	5,438	4,012	367,500	7,480	0
37	6/18/2023	85.7	8,493	3,680	4,356	340,008	7,393	0
38	6/18/2023	88.7	8,388	5,342	4,264	367,500	7,606	0
39	6/18/2023	86.2	8,243	5,123	4,721	367,500	7,505	0
40	6/18/2023	84.3	8,056	5,208	4,311	367,500	7,750	0
41	6/18/2023	85.9	7,938	5,374	4,190	367,500	7,682	0
42	6/18/2023	87.3	7,838	5,748	3,605	367,500	7,698	0
43	6/19/2023	77.8	7,335	5,243	4,562	367,500	7,195	0
44	6/19/2023	80.4	7,719	5,462	4,022	367,500	8,072	0
45	6/19/2023	93.2	8,577	5,178	4,214	367,500	8,822	0
46	6/19/2023	80.7	8,234	5,412	3,884	367,500	10,866	0
47	6/20/2023	80.3	7,896	5,484	4,465	367,500	12,082	0
48	6/20/2023	89.6	7,791	5,367	4,969	367,500	8,944	0
49	6/20/2023	91.1	7,764	5,419	4,432	367,500	8,963	0
50	6/20/2023	90.6	7,243	3,442	4,975	367,500	8,341	0
51	6/21/2023	90	7,483	5,815	4,256	367,500	8,471	0
52	6/21/2023	86.5	7,656	5,607	4,201	367,500	8,356	0
53	6/21/2023	86.2	7,305	3,850	7,279	367,500	8,605	0

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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	6/21/2023	85.4	7,392	5,560	3,694	367,500	8,268	0
55	6/21/2023	89.7	7,409	5,420	5,420	367,500	8,323	0
56	6/21/2023	94.5	7,742	3,720	7,054	367,500	8,666	0
57	6/22/2023	93.7	7,790	5,109	5,230	367,500	8,190	0
58	6/22/2023	86.1	7,340	5,126	4,254	367,500	8,153	0
59	6/22/2023	86.5	7,204	5,836	4,225	367,500	8,507	0
60	6/22/2023	87.4	7,207	5,148	4,452	367,500	8,226	0
61	6/22/2023	95.7	7,720	4,521	4,477	367,500	8,553	0
62	6/22/2023	94.4	7,487	4,750	5,820	367,500	8,524	0
63	6/23/2023	90.8	7,255	5,124	4,230	367,500	8,384	0
64	6/23/2023	91.9	7,274	4,952	4,321	367,500	8,308	0
65	6/23/2023	86.9	7,260	5,772	4,153	367,500	8,156	0
66	6/23/2023	86.6	7,106	5,430	4,120	367,500	7,996	0
67	6/23/2023	86.4	6,941	4,780	4,251	367,500	8,312	0
68	6/23/2023	91	7,105	4,705	4,345	367,500	8,401	0
69	6/23/2023	93.4	7,349	4,780	4,231	367,500	8,113	0
70	6/24/2023	93.5	7,373	5,223	4,345	367,500	8,159	0
71	6/24/2023	91.6	7,254	4,260	4,467	367,500	8,084	0
72	6/24/2023	87	6,913	5,500	4,500	367,500	8,083	0
73	6/24/2023	88.5	6,630	3,800	4,800	367,500	8,254	0
74	6/24/2023	88.6	7,048	5,456	4,378	367,500	8,062	0
75	6/24/2023	86.6	7,054	5,630	4,800	367,500	8,041	0
76	6/24/2023	86.7	6,899	4,600	4,450	367,500	8,168	0
77	6/24/2023	92.8	6,986	4,620	4,450	367,500	8,035	0
78	6/24/2023	94.2	7,028	4,100	4,450	367,500	8,045	0
79	6/25/2023	94.5	7,066	5,411	4,700	367,500	8,115	0
80	6/25/2023	92	6,805	5,300	4,750	367,500	8,079	0
81	6/25/2023	88.5	6,751	4,000	4,700	367,500	7,929	0
82	6/25/2023	86.6	6,886	4,100	4,600	367,500	8,006	0
83	6/25/2023	86.6	6,870	5,345	4,900	367,500	7,905	0
84	6/25/2023	89	6,737	4,450	4,700	367,500	7,944	0
85	6/25/2023	91.5	6,771	4,678	4,576	367,500	7,954	0
86	6/25/2023	91.9	6,806	5,220	4,850	367,500	7,934	0
87	6/25/2023	94.2	6,869	4,621	4,654	367,500	7,998	0
88	6/26/2023	93.3	6,860	5,171	4,689	367,500	8,243	0
89	6/26/2023	94.2	6,918	4,455	4,689	367,500	7,910	0
90	6/26/2023	87.2	6,627	5,277	4,567	367,500	7,769	0
91	6/26/2023	87.1	6,702	5,304	4,398	367,500	7,972	0
92	6/26/2023	86.9	6,557	5,309	4,897	367,500	7,905	0
93	6/26/2023	67.5	6,510	5,348	4,623	367,500	9,990	0
94	6/26/2023	94	6,700	5,470	4,350	367,500	8,036	0
95	6/26/2023	94.5	6,755	5,500	4,600	367,500	7,842	0
96	6/27/2023	90	6,259	5,500	4,568	367,500	7,846	0
97	6/27/2023	89.8	6,374	5,307	4,989	367,500	7,916	0
98	6/27/2023	82.1	6,240	5,132	5,100	367,500	7,620	0
99	6/27/2023	90.7	6,613	5,265	4,446	367,500	7,854	0
100	6/27/2023	86.9	6,355	4,700	4,800	367,500	7,722	0
101	6/27/2023	86.9	6,243	5,100	4,900	367,500	7,687	0
102	6/27/2023	86.9	6,226	5,200	4,765	367,500	7,664	0
103	6/27/2023	90	6,121	5,597	4,687	367,500	7,996	0
104	6/27/2023	88.7	6,055	5,027	4,785	367,500	7,696	0
105	6/27/2023	90	6,106	5,183	4,358	367,500	7,958	0

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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	543.00	543.00	
Top of Salt Water	693.00	693.00	NA	NA	
Pittsburgh Coal	135.00	135.00	185.00	185.00	
Berea (siltstone)	1742.00	1731.00	1818.00	1803.00	
Rhinestreet (shale)	5543.00	5220.00	5780.00	5416.00	
Middlesex (shale)	5780.00	5416.00	5859.00	5472.00	
Burket (shale)	5859.00	5472.00	5882.00	5487.00	
Tully (ls)	5882.00	5487.00	5969.00	5540.00	
Mahantango (shale)	5969.00	5540.00	6124.00	5611.00	
Marcellus (shale)	6124.00	5611.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/9/2023
Job End Date:	6/28/2023
State:	West Virginia
County:	Brooke
API Number:	47-009-00333-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	STATE OF WV DNR B BRK 401
Latitude:	40.34099195
Longitude:	-80.52774231
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,554
Total Base Water Volume (gal):	36,624,666
Total Base Non Water Volume:	0



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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	88.52000	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	45.00000	0.29761	

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			Water	7732-18-5	100.00000	0.29761	
			Water	7732-18-5	85.00000	0.29761	
Sand	SWN Well Services	Proppant		Listed Below			
				Listed Below			
FSTL-CI-02	SWN Well Services	Corrosion Inhibitor		Listed Below			
				Listed Below			
Plexslick 930	SWN Well Services	Friction Reducer		Listed Below			
				Listed Below			
Tollicide 4Frac	SWN Well Services	Biocide		Listed Below			
				Listed Below			
HCL	SWN Well Services	Solvent		Listed Below			
				Listed Below			
Ferriplex 80	SWN Well Services	Iron Control		Listed Below			
				Listed Below			
Plexaid 655NM	SWN Well Services	Scale Inhibitor		Listed Below			
				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	11.09669	
			Hydrochloric Acid	7647-01-0	15.00000	0.04321	

				Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	45.00000	0.00467	
				Sodium Erythorbate	6381-77-7	100.00000	0.00154	
				Quaternary ammonium compounds	68424-85-1	7.50000	0.00078	
				Ethanol	64-17-5	2.50000	0.00026	
				Ethylene glycol	107-21-1	40.00000	0.00018	
				Cinnamaldehyde	104-55-2	10.00000	0.00004	
				Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	10.00000	0.00004	
				N,N-Dimethylformamide	68-12-2	10.00000	0.00004	
				1-Decanol	112-30-1	5.00000	0.00002	
				1-Octanol	111-87-5	5.00000	0.00002	
				benzyl chloridquaternized	72480-70-7	5.00000	0.00002	
				Isopropyl alcohol	67-63-0	5.00000	0.00002	
				2-Butoxyethanol	111-76-2	5.00000	0.00002	
				Triethyl phosphate	78-40-0	5.00000	0.00002	

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* 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)

Via Federal Express

September 22, 2023

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

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

To Whom It May Concern:

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

API	Well Name
47-009-00333	State of WV DNR B 401H

If you have any questions or require additional information, please contact me via email at carol_pruitt@swn.com or telephone at (832) 796-3007.

Sincerely,



Carol A. Pruitt
Sr. Regulatory Specialist
SW Appalachia Division

/cap
Encl.

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WV Department of
Environmental Protection

NO DISCHARGE

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

Company Name: SWN PRODUCTION COMPANY, LLC
API No: 47-009-00333 County: BROOKE/OHIO
District: CROSS CREEK Well No: STATE OF WV DNR B BRK 401H
Farm Name: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR
Discharge Date/s From:(MMDDYY) _____ To: (MMDDYY) _____
Discharge Times. From: _____ To: _____
Total Volume to be Disposed from this facility (gallons): _____
Disposal Option(s) Utilized (write volumes in gallons): _____

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

Follow Instructions below to determine your treatment category:

Optional Pretreatment test: _____ Cl- mg/l _____ DO mg/l

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

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Name of Principal Exec. Officer: _____
Title of Officer: _____
Date Completed: _____

WV Department of
Environmental Protection

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

Signature of a Principal Exec. Officer or Authorized agent.

Category 1
Sampling Results
API No : _____

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

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

Category 2
Sampling Results
API No : _____

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

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

(Inspector's signature): _____

Date: _____

** Include a description of your aeration technique.

Aeration Code: _____

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

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WV Department of
Environmental Protection

Category 3
Sampling Results
API No : _____

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

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

(Inspector's signature): _____ Date: _____
 ** Include a description of your aeration technique. Aeration Code: _____
 *** Al is only reported if the pH is above 9.0.

Category 4
Sampling Results
API No: _____

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WV Department of
Environmental Protection

Parameter	Predischarge		Discharge		Units
	Limits	Reported	Limits	Reported	
pH	6-10	_____	6-10	_____	S.U
Settling Time	1	_____	N/A	N/A	Days
Fe	Monitor	_____	Monitor	_____	mg/l
D.O.	Monitor	_____	Monitor	_____	mg/l
Settleable Sol.	Monitor	_____	Monitor	_____	mg/l
Cl*	12,500	_____	12,500	_____	mg/l
Oil	Trace	_____	Trace	_____	Obs.
TOC**		_____	Monitor	_____	mg/l
Oil and Grease		_____	Monitor	_____	mg/l
TSS		_____	Monitor	_____	mg/l
Total Mn	Monitor	_____	Monitor	_____	mg/l
Volume		_____	Monitor	_____	Gal
Flow		_____	Monitor	_____	Gal/min
Activated Carbon (0.175)		_____	N/A	N/A	lb/B1
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area		_____	Monitor	_____	Acres

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

(Inspector's signature): _____ Date: _____

LATITUDE: 40°22'30" SURFACE HOLE (2000' SCALE)

7785'

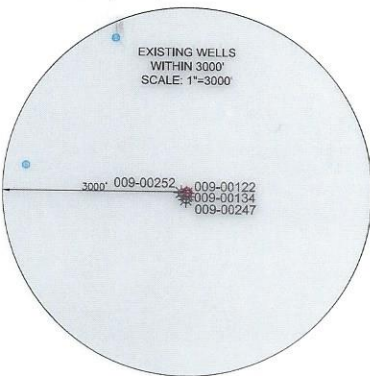
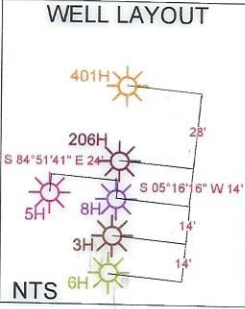
LATITUDE: 40°25'00" BOTTOM HOLE (2000' SCALE)

6613'



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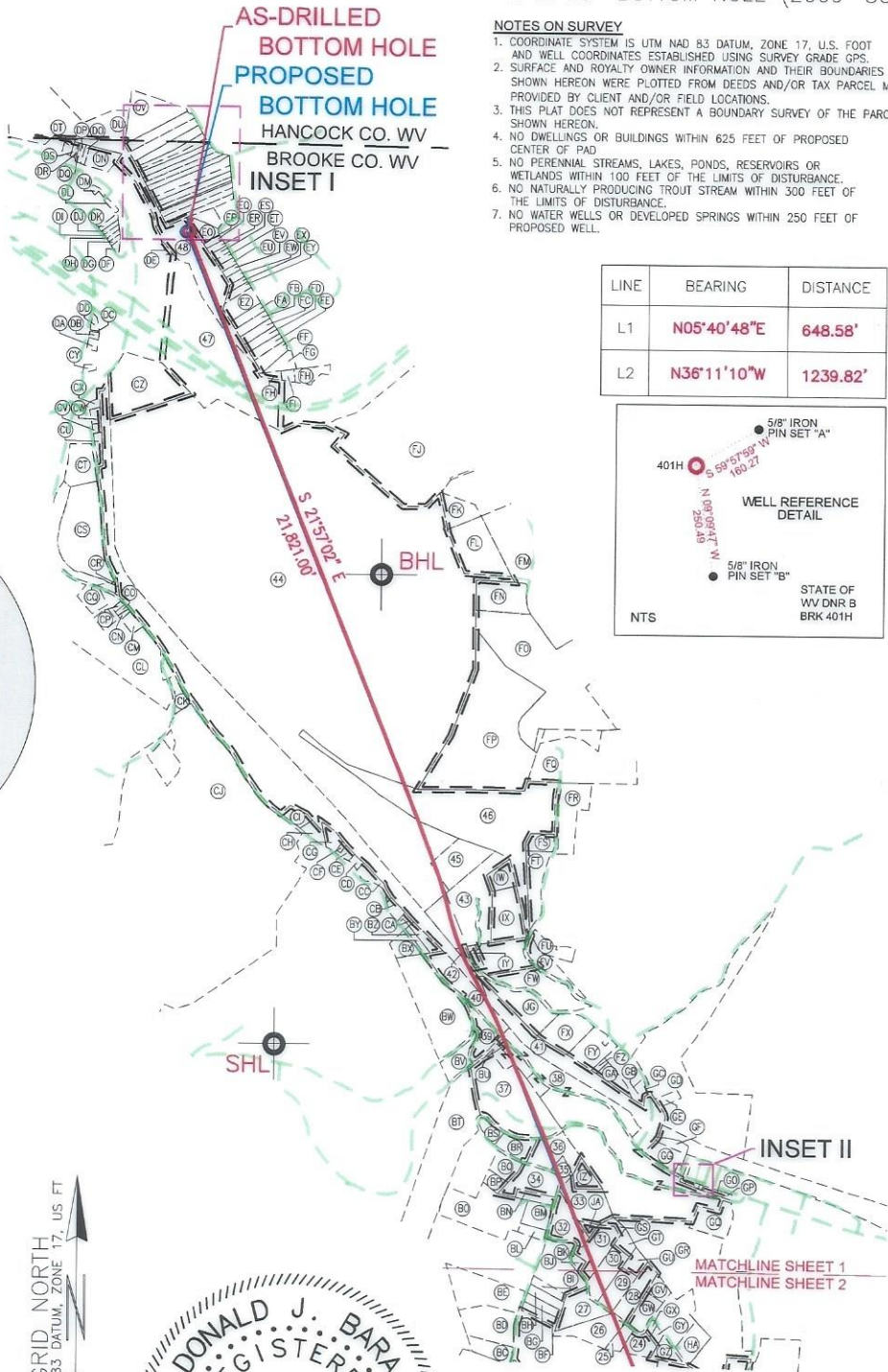
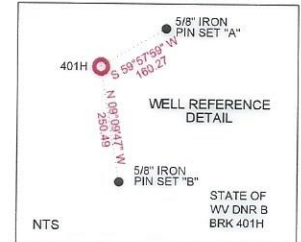
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100



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.

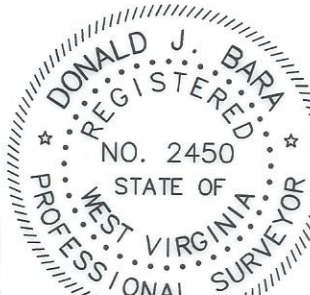
LINE	BEARING	DISTANCE
L1	N05°40'48"E	648.58'
L2	N36°11'10"W	1239.82'



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

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

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465712.12 EASTING: 540110.62
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465786.46 EASTING: 539483.41
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4471910.30 EASTING: 536895.14
SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465712.15 EASTING: 540110.53
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4465715.51 EASTING: 539511.54
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4471906.88 EASTING: 536886.69



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>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034.</p>	MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SURVEY SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	STATE OF WV DNR B BRK OPERATOR'S WELL #: 401H API WELL #: 47 009 00333 STATE COUNTY PERMIT
--	---	--

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

WATERSHED: UPPER OHIO NORTH ELEVATION: 1201.3'

DISTRICT: CROSS CREEK COUNTY: BROOKE/OHIO QUADRANGLE: STEUBENVILLE EAST

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

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: 5,664' TVD 28,466' 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: ● EXISTING BOTTOM HOLE ☼ EXISTING / PRODUCING WELL-HEAD LPL ● EXISTING LANDING POINT LOCATION ● PROPOSED SURFACE HOLE / BOTTOM HOLE LPL ● PROPOSED LANDING POINT LOCATION — ACCESS ROAD — PUBLIC ROAD — FLOOD PLAIN — LEASE BOUNDARY — AS-DRILLED PATH — PROPOSED PATH	REVISIONS: DATE: 05-31-2023 API NO: 47-009-00333 DRAWN BY: Z. WOOD SCALE: 1" = 2000' DRAWING NO: 2017-541 WELL LOCATION PLAT
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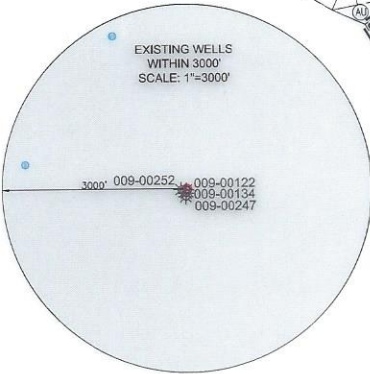
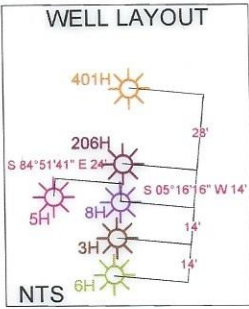
LATITUDE: 40°22'30" SURFACE HOLE (2000' SCALE)

7785'
6613'
LATITUDE: 40°25'00" BOTTOM HOLE (2000' SCALE)



www.jhacompanies.com

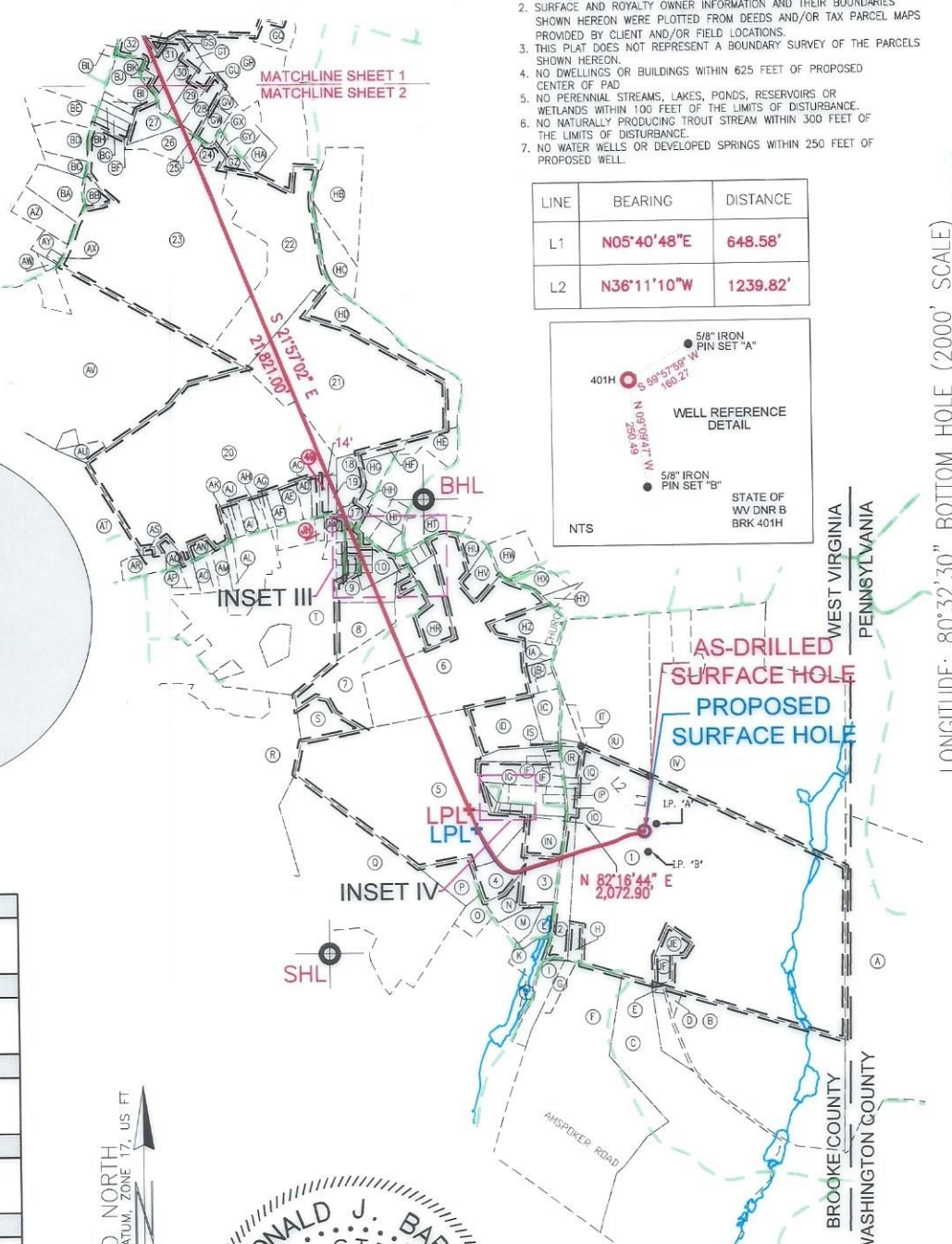
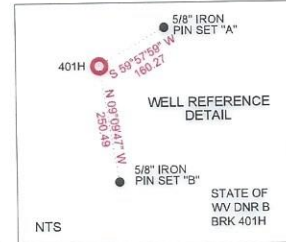
68011 Vineyard Road
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740-695-6100



NOTES ON SURVEY

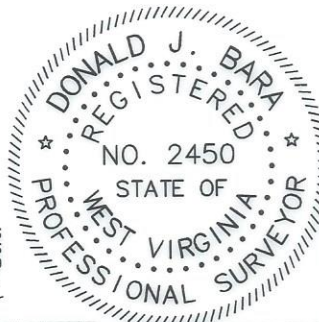
- COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
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L2	N36°11'10"W	1239.82'



7111'
12423'
LONGITUDE: 80°32'30" BOTTOM HOLE (2000' SCALE)
LONGITUDE: 80°30'00" SURFACE HOLE (2000' SCALE)

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4465712.12 EASTING: 540110.62
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P.S., 2450

COMPANY: **SWN** Production Company, LLC **SWN** Production Company™

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p>	<p>STATE OF WV DNR B BRK</p> <p>OPERATOR'S WELL #: 401H</p> <p>API WELL #: 47 009 00333</p> <p>STATE COUNTY PERMIT</p>
---	---	---

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

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DISTRICT: CROSS CREEK COUNTY: BROOKE/OHIO QUADRANGLE: STEUBENVILLE EAST

SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

OIL & GAS ROYALTY OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR ACREAGE: ±169.43

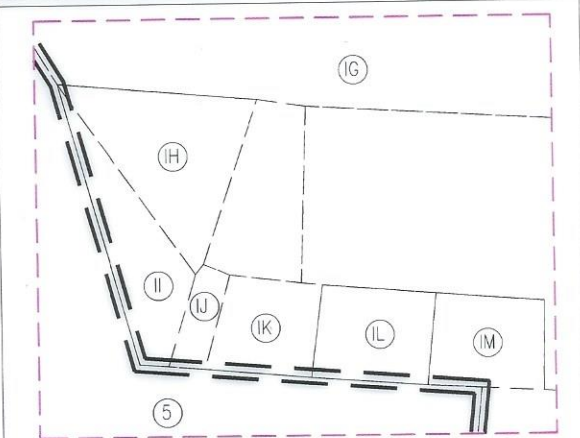
DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,664' TVD 28,466' TMD

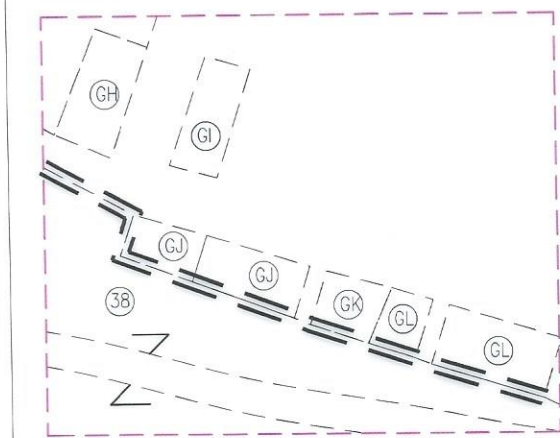
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

<p>LEGEND:</p> <ul style="list-style-type: none"> 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 PLAIN LEASE BOUNDARY ASDRILLED PATH PROPOSED PATH 	<p>REVISIONS:</p>	<p>DATE: 05-31-2023</p> <p>API NO: 47-009-00333</p> <p>DRAWN BY: Z. WOOD</p> <p>SCALE: 1" = 2000'</p> <p>DRAWING NO: 2017-541</p> <p>WELL LOCATION PLAT</p>
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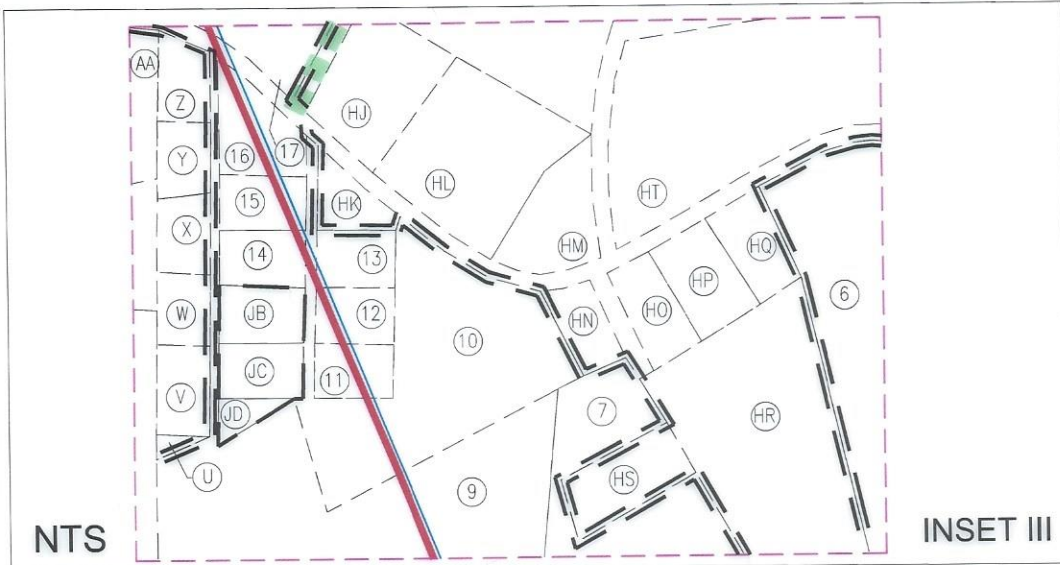
NTS

INSET IV



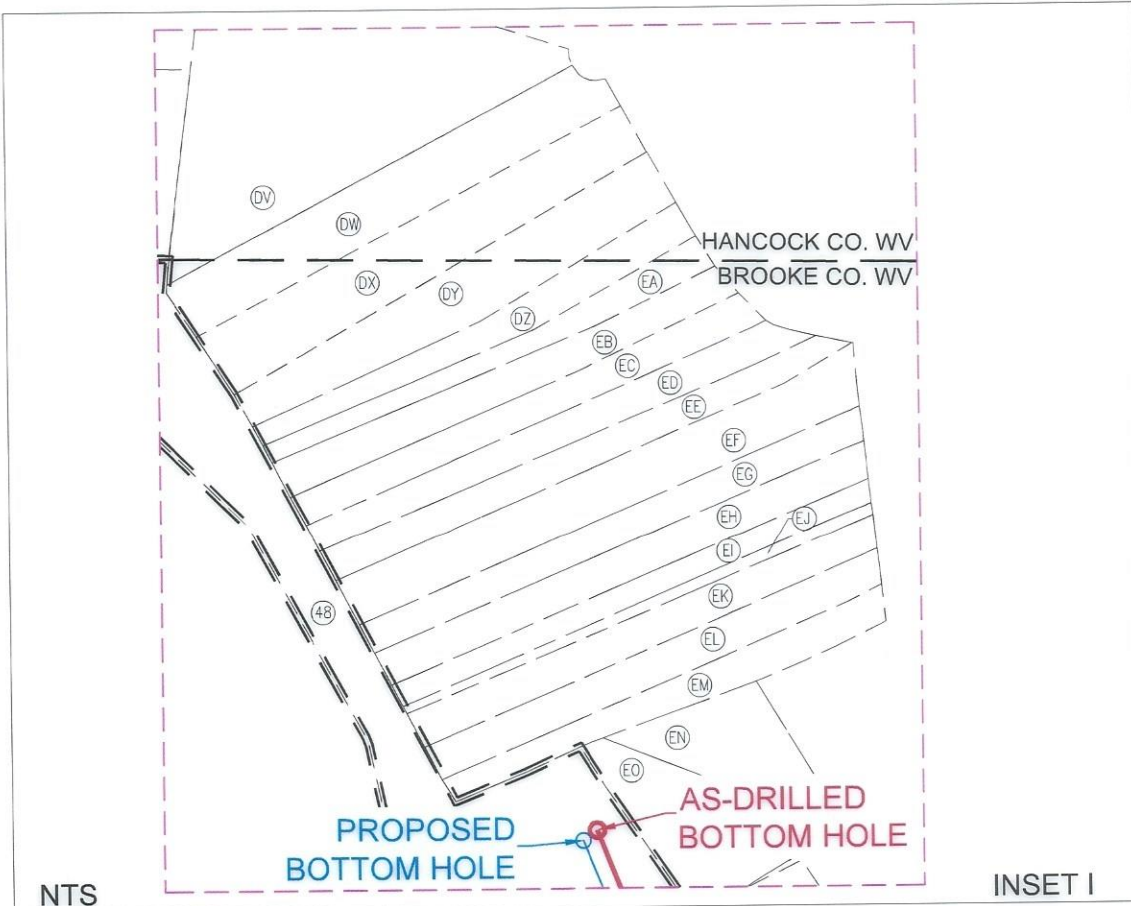
NTS

INSET II



NTS

INSET III





NTS

INSET I



REVISIONS:

COMPANY:		SWN Production Company, LLC		SWN ^{R+} / _A ^{V+} / ₊ Production Company™	
OPERATOR'S		STATE OF WV DNR B BRK			
WELL #:		401H			
DISTRICT:	COUNTY:	STATE:	DATE: 05-31-2023		
CROSS CREEK	BROOKE/OHIO	WV	API NO: 47-009-00333		
DRAWING NO: 2017-541			DRAWN BY: Z. WOOD		
WELL LOCATION PLAT			SCALE: N/A		

WELL BORE TABLE FOR SURFACE/ROYALTY OWNERS			ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	TRACT	SURFACE OWNER	TAX PARCEL
1	STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DIVISON OF NATURAL RESOURCES, PUBLIC LAND CORPORATION FOR THE USE AND BENEFIT OF THE WILDLIFE RESOURCES SECTION (S/R)	4-CC16-19	A	MCDERMITT ARTHUR C JR,	380-8-7-1
			B	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	4-CC16-22
			C	ST OF WV BUREAU OF COMM-DNR PUBLIC LAND CORP	4-CC16-23.1
			D	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	4-CC16-20
			E	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD CORP	4-CC16-21
			F	WEST VIRGINIA ST OF BUREAU OF COMM DIV OF NAT RES PB LD	4-CC16-11
2	TICE DANNY D & MARCIA (SURV)	4-CC16-16	G	PAULES DONNA K	4-CC16-14
3	FAMILY CONNECTIONS INC	4-CC16-26	H	CUNNINGHAM TIMOTHY BRIAN	4-CC16-15
4	SUTER ARISSA M; COCHRAN KENNETH A (SURV)	4-CC16-27	I	MOLNAR DENNIS SR & DENNIS JR	4-CC16-13
5	LEWIS MATTHEW C & HOLLY W (SURV)	4-CC12-54.1	J	MOLNAR DENNIS SR & DENNIS JR	4-CC16-13
6	LANTZ SUSAN PORCH	4-C12J-28	K	HOOPER TIMOTHY S & STACY (SURV)	4-CC12-54
7	DENNIS TAWNIA R	4-C12J-33	L	TENNANT WILLIAM J & APRIL L (JTWS)	4-CC16-34
8	DENNIS TAWNIA R	4-C12J-42	M	ABATE ALICIA F	4-CC16-30
9	TRUEX MARK	4-C12J-41	N	STECIK KIRK & BRANDY L JTWS	4-CC16-29
10	TRUEX MARK	4-C12J-36	O	WILLS KENNETH 1/3 WILLS TED 1/3 ELLERY DONNA 1/3	4-CC16-33
11	RICHMOND TRACY S	4-C12J-40	P	VANCAMP NEIL E JR & MICHELLE L (SURV)	4-CC16-28
12	YANDRICH PATRICIA ANN	4-C12J-39	Q	MAROSI PAUL	4-CC16-1
13	MCCLAIN RONALD W & TAMMY	4-C12J-38	R	IVILL LIVING TRUST CHERYL TRUSTEE	4-C115-58
14	SMITH DANIEL LOUIS & JUDITH ANN	4-C12J-46	S	DENNIS TAWNIA R	4-CC12-62
15	CEBULA NICHOLAS; DEBORAH L (SURV)	4-C12J-47	T	PETREL IRREV TRUST 7/25/13 PETREL NANCY, TRUSTEE	4-C11M-34
16	LEE DOUGLAS; HEADMOND DANA M (SURV)	4-C12J-48	U	PETROSKY STANLEY L & SANDRA M (SURV) (TUD)	4-C12J-54
17	CAPRARESE ANDREW W	4-C12J-5	V	PETROSKY STANLEY & SANDRA M (SURV) (TUD)	4-C12J-53
18	EVANS BRAD A & MELISSA JO (SURV)	4-C12J-4	W	PETROSKY STANLEY & SANDRA M (SURV) (TUD)	4-C12J-52
19	KEISTER PHILLIP DANIEL; DAVID LEE (LE-JUDY KEISTER)	4-C12J-3	X	SNATCHKO JOHN & CARRIE (SURV)	4-C12J-51
20	SECRET MARK C JR & MARY E (SURV)	4-C11M-5	Y	DIVENANZO FRANCO	4-C12J-50
21	PETREL IRREVOCABLE TR AGREE DTD 7/25/13	4-CC12-5	Z	STEVENS STEFANIE & SANDRETH CODY (SURV)	4-C12J-49
22	FREESTAR ENERGY GROUP	4-CC11-78	AA	KERNS JAMES M	4-C12J-57
23	MCCASLAND JEFFREY PAUL & NANCY DARLENE	4-CC11-79	AB	REMOVED	REMOVED
24	MUSICO LARA DONNA;MOTT APRYL DAWN (LE-JOSEPH MUSICO)	4-CC11-72	AC	MCLAUGHLIN KENNETH J JR AMY M (SURV)	4-C12J-1
25	BENNETT CARLETON-1/2 WINLAND DONNA;BENNET EARL;	4-CC11-71	AD	CAIN GLENN JR & VALERIE C (SURV)	4-C11M-12
26	TOMES DEBBIE	4-CC75-17	AE	GASTON LARRY J & TINA C DINIACO GASTON (SURV)	4-C11M-11
27	DULANEY CARL G JR	4-CC75-16	AF	REALE MICHAEL N	4-C11M-5.2
28	DOAK BRIAN R	4-CC75-24	AG	REALE MICHAEL N	4-C11M-10
29	DULANEY CARL G JR	4-CC75-25	AH	MESTER LUKE A	4-C11M-9
30	DULANEY CARL G JR	4-CC75-27	AI	MESTER LUKE A	4-C11M-8
31	DAVIS ROBERT E & SHARON (SURV)	4-CC75-15	AJ	GRIMM STEPHEN R & TAMERA K	4-C11M-7
32	DAVIS ROBERT E & SHARON E (SURV)	4-CC75-30	AK	GRIMM STEPHEN R & TAMERA K (SURV)	4-C11M-6
33	KIMBALL KENNETH L & RICHARD E (JTWS)	4-CC75-31	AL	LATIMER ROBERT S	4-C11M-23
34	MAASKANT BELINDA; RICHTER STEVEN	4-CC75-2	AM	LEMASTERS MARY L	4-C11M-24
35	KIMBALL KENNETH L & APRIL L (SURV)	4-CC75-33	AN	CONN ROBERT W	4-C11M-5.1
36	KIMBALL KENNETH & APRIL L	4-CC75-34	AO	RAHR JAMES W	4-C11M-26
37	BROWNING DAVID S & LORI L	4-CC7-28	AP	MCVICKER MATTHEW A & ASHLEY G (JTWS)	4-C11M-27
38	VALERO ENER SERV LLC	4-CC7-27	AQ	GOURLEY GERALD E	4-C11M-4
39	METALICO COLLIERS REALTY INC A WV CORP	4-CC7-31.1	AR	ST JOHNS EPISCOPAL CHURCH	4-C11M-3
40	APERFINE JOSEPH P SR	4-CC7-31.2	AS	OLDE ST JOHN'S EPISCOPAL CHURCH, TRUSTEES OF	4-C11M-5.3
41	WV STATE RAIL AUTHORITY	6-W8-48	AT	SECRET MARK C JR & MARY E JTWS	4-C11M-1
42	STARVAGGI INDUSTRIES	6-W7-12	AU	LIZON MELISSA MAY	4-CC11-85
43	BOYER (COOK) ELIZABETH; SCHILL APRIL (SURV)	6-W7-3	AV	GRIFFITH SUSAN BETH MCBRIDE & MCBRIDE WYLIE JR	4-CC11-83
44	BROWNLEE LAND VENTURES LP	6-W3-4	AW	JONES DUANE W	4-CC11-65.1
45	TESLOVICH BRIAN	6-W7-2	AX	VIRTUE DANIEL R & DIANE (SURV)	4-CC11-66
46	HVIZDAK GEORGE D	6-W7-21	AY	VIRTUE DANIEL R & DIANE L (SURV)	4-CC11-67
47	STATE OF WEST VIRGINIA, DIVISON OF HIGHWAYS	US ROUTE 22	AZ	LYONS JEFFREY C CASEY L (JTWS)	4-CC11-68
48	STARVAGGI INDUSTRIES	6-W3F-47	BA	HARRIS DONALD E & LOIS J (SURVIVORSHIP)	4-CC11-69
49	KERNS ROBERT L JR (LE-PEGGY A STILLWELL)	4-C12J-2	BB	WORSTELL WALTER L & JAMES L (SURV)	4-CC11-79.1
			BC	KNOX JEFF	4-CC11-96
			BD	STILLSON ROSEMARY	4-CC75-10
			BE	UNDERWOOD JOSEPH D	4-CC75-9
			BF	STROPE LOLA	4-CC75-11
			BG	VIRTUE DANIEL & DIANE (SURV)	4-CC75-12
			BH	LONG JASON R & JANET	4-CC75-13
			BI	LONG JASON R & JANET ANN	4-CC75-14
			BJ	DAVIS ROBERT E & SHARON (SURV)	4-CC75-15
			BK	SLOSS RAYMOND T & VERONICA K (SURV)	4-CC75-29
			BL	DULANEY CARL G	4-CC75-4
			BM	STEWART THOMAS A	4-CC75-4.1

REVISIONS:	COMPANY:  	
	OPERATOR'S: STATE OF WV DNR B BRK	DATE: 05-31-2023
	WELL #: 401H	API NO: 47-009-00333
	DISTRICT: CROSS CREEK	DRAWN BY: Z. WOOD
	COUNTY: BROOKE/OHIO	SCALE: N/A
	STATE: WV	DRAWING NO: 2017-541
		WELL LOCATION PLAT

ADJOINING OWNERS TABLE			ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL	TRACT	SURFACE OWNER	TAX PARCEL
BN	RICHTER MILDRED	4-CC75-3	EA	KARAVOLOS MIKE J & NANCY J (JTWS)	6-W3F-67
BO	HOFF LYNN E (LE-JANET CESSNA)	4-CC75-5.1	EB	GUGLIELMO EUGENE J	6-W3F-66
BP	DADOUSH MEIR & KIMBERLY AKA LAWVER KIMBERLY (JTWS)	4-CC75-1.1	EC	BARTLETT CHRISTINE M ET AL (L EST-LOUIS BRUNO JR)	6-W3F-65
BQ	DADOUSH MEIR & LAWVER DADOUSH KIMBERLY (JTWS)	4-CC75-1	ED	BARTLETT CHRISTINE M ET AL (LE-LOUIS BRUNO JR)	6-W3F-64
BR	BALLATO ROSS L & NANCY C	4-CC75-35	EE	BARTLETT CHRISTINE M ET AL (L EST-LOUIS BRUNO JR)	6-W3F-63
BS	BALLATO ROSS L & NANCY C	4-CC7-29	EF	SMITH EDDIE LEE (LC-SMITH SHAWN & BEVERLY)	6-W3F-62
BT	WESLEY LLC	4-CC7-105	EG	VUILLER DEBORA K	6-W3F-61
BU	HFS LIMITED LIABILITY COMPANY	4-CC7-113	EH	DAVIS ARTHUR R	6-W3F-60
BV	WESLEY LLC	4-CC7-31	EI	GLOVER FAMILY IRREVOCABLE TR 10/30/03 TRUS REBECCA	6-W3F-59
BW	WESLEY LLC	4-CC7-31	EJ	GLOVER FAMILY IRREVOCABLE TR 10/30/09 TRUS REBECCA	6-W3F-58
BX	HUMES JOHN F III & BONNIE J JTWS	4-CC7-23	EK	ANDERSON PAUL ORANGE0 JULIA (SURV)	6-W3G-44
BY	HUMES JOHN F III & BONNIE J JTWS	4-CC7-23	EL	PENARANDA MELANIE ANN	6-W3G-45
BZ	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-3	EM	ROBERTSON EVELYN	6-W3G-46
CA	YOST EVA MARIE REED MELISSA E	4-CC7-22	EN	YENCHOCHIC THOMAS G & MARGARET	6-W3F-55
CB	YOST EVA MARIE REED MELISSA E	4-CC7-20	EO	CUNNINGHAM DONALD C ET AL LE-ROSE ANN CUNNINGHAM	6-W3F-54
CC	BROOKE COUNTY COMMISSION	4-CC7-19	EP	EWUSIAK KEVIN	6-W3F-51
CD	BROOKE COUNTY COMMISSION	4-CC7-18	EQ	EWUSIAK KEVIN	6-W3F-50
CE	TAYLOR GARY R	4-CC7-17	ER	JAROSZYNSKI NICHOLAS J	6-W3F-49
CF	TAYLOR GARY R	4-CC7-16	ES	LAPOSTA KEVAN & CHELSEA (JTWS)	6-W3F-48
CG	TAYLOR GARY R	4-CC7-15	ET	BANE CLAYTON MARCHANT & JOANNE	6-W3G-53
CH	CHAMP RANDALL & CRYSTAL	4-CC7-14	EU	MAKRICOSTAS PROPERTIES LLC	6-W3L-1
CI	GREEN ACRES LLC 1975 HARMON CK RD	4-CC7-13	EV	MORGAN JOHN & SUSAN (JTWS)	6-W3L-2
CJ	PETRELLI BEVERLY GAIL	4-CC7-10	EW	HAIJOANNAOU CONSTANTIA	6-W3L-3
CK	M B INVESTMENTS	4-CC7-7	EX	SAUER JAMES T & ERICA M (SURV) JTWS	6-W3L-4
CL	PETRELLI BEVERLY GAIL	4-CC7-10	EY	MILLER ARTHUR G & JEANETTE	6-W3L-5
CM	CHIODI DOMENIC J & SUE A (SURV)	4-CC7-6	EZ	KAKASCIK THOMAS F & MARY (SURV)	6-W3L-6
CN	CHIODI DOMINIC JOE & SUE ANN (SURV)	4-CC7-5	FA	HIRKALA JAMES F & BARBARA J (SURV)	6-W3L-7
CO	CHIODI SUE ANN DODD SANDRA JEAN	4-CC7-4	FB	RISOVICH FREDERICK A & ALAINA M (JTWS)	6-W3L-8
CP	KIMBALL MITCHELL DALE & DEBORAH SUE (SURV)	4-CC7-3	FC	PLACEK 2015 LIVING TRUST	6-W3L-9
CQ	PETRELLI BEVERLY GAIL	4-CC7-10	FD	SPENCER STEPHEN PAUL	6-W3L-10
CR	MONTANA SKY LLC	4-CC3-37	FE	ZEIGLER JAMES M & CAROL VORHEES-ZEIGLER (SURV)	6-W3L-11
CS	PETRELLI BEVERLY GAIL	4-CC7-10	FF	HAULDREN RICHARD E & FRANCINE E	6-W3L-12
CT	DELONG CHARLES N & BARBARA G (SURV)	4-CC3-34	FG	ZAGULA BONNIE L	6-W3L-13
CU	DULANEY MICHAEL S & KAREN S; (SURV)	4-CC3-21	FH	WEIRTON CITY OF (PARK)	6-W3L-15
CV	MARTIN KRISTOPHER J & ERICKA N (SURV)	4-CC3-20	FI	ZAGULA BONNIE L	6-W3L-14
CW	MARTIN LOIS A	4-CC3K-36	FJ	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-7.6
CX	BRENNAN ROBERT JOHN & SHARON LYNN	4-CC3K-37	FK	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-4.1
CY	LEMAL JOSEPH JAMES	4-CC3K-38	FL	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-5.1
CZ	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-3	FM	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-7
DA	JAHN DIETER H	4-CC3K-41	FN	MORELLI BROTHERS BLOCK & BRICK COMPANY INC	6-W3-7.12
DB	PANHANDLE RAIL TRAIL ASSOCIATION OF WV INC	4-CC3K-40	FO	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-29
DC	WEIRTON BOARD OF PARKS & RECREATION COMMISSIONERS	4-CC3K-42.1	FP	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-28
DD	SAFARI OUTDOOR ADVERTISING INC	4-CC3K-43	FQ	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-18
DE	W VA DEPT OF HIGHWAYS	6-W3F-46	FR	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-15
DF	WEST VIRGINIA DIVISION OF HIGHWAYS	6-W3F-45	FS	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-22
DG	NORTHERN PANHANDLE SHRINER'S CLUB	6-W3F-44	FT	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-23
DH	NORTHERN PANHANDLE SHRINER'S CLUB	6-W3F-43	FU	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-6
DI	CHANZE CHESTER EUGENE & DONNA	6-W3F-42	FV	REED LARRY E	6-W7M-20
DJ	WEIRTON CITY OF	6-W3F-41	FW	REED LARRY E	6-W7M-20
DK	WEIRTON CITY OF	6-W3F-40	FX	STARGAZER LAND CONSERVANCY LLC	6-W7M-2
DL	HOLLEY CLINTON R & JESSICA (JTWS)	6-W3F-39	FY	REED LARRY E	6-W7M-20
DM	ICE MARK SR	6-W3F-31	FZ	SVOKAS NICK	6-W7M-3
DN	MCABEE MARY	6-W3F-70	GA	CRAIN JAMES R JR & PAMELA K (SURV)	6-W7M-6
DO	MCCOY JACK L	6-W3F-71	GB	NESSERROAD NIKKI (KNA) GEPHART NIKKI & RICHARD	6-W7M-13
DP	JUROSKO BRIAN S	6-W3F-72	GC	GEPHART RICHARD & NIKKI	6-W7M-21
DQ	JUROSKO BRIAN S	6-W3F-73	GD	GRANATO MICHAEL; REASBECK AMY M (SURV)	6-W7-12
DR	JUROSKO BRIAN S	6-W3F-74	GE	STEWART KENNETH R	6-W7M-15
DS	JUROSKO BRIAN S	6-W3F-75	GF	VALERO ENER SERV LLC	4-CC7-27
DT	KLEPACK MICHAEL J & CARLA M	6-W3F-76	GG	COLLIERS STATION LLC	4-CC75-36
DU	UNKNOWN	UNKNOWN	GH	FABIAN ROBERT J & DEBRA L	4-CC75-37
DV	WAGNER BENJAMIN K ET UX	6-W43P-67	GI	FABIAN ROBERT & DEBRA	4-CC75-38
DW	WAGNER BENJAMIN K ET UX	6-W43P-68	GJ	NAZARENE CHURCH OF COLLIERS	4-CC75-67
DX	GRAY COREY M	6-W43P-69	GK	NAZARENE CHURCH	4-CC75-66
DY	GUGLIELMO EUGENE (SURV)	6-W3F-69	GL	COLLIERS CHURCH OF THE NAZARENE TRUSTEES	4-CC75-65
DZ	HIGHLEY KEYSTONE TR 7/23/12 TRUS-MARTHA HIGHLEY	6-W3F-68	GM	DAVIS JEFFREY A	4-CC75-64

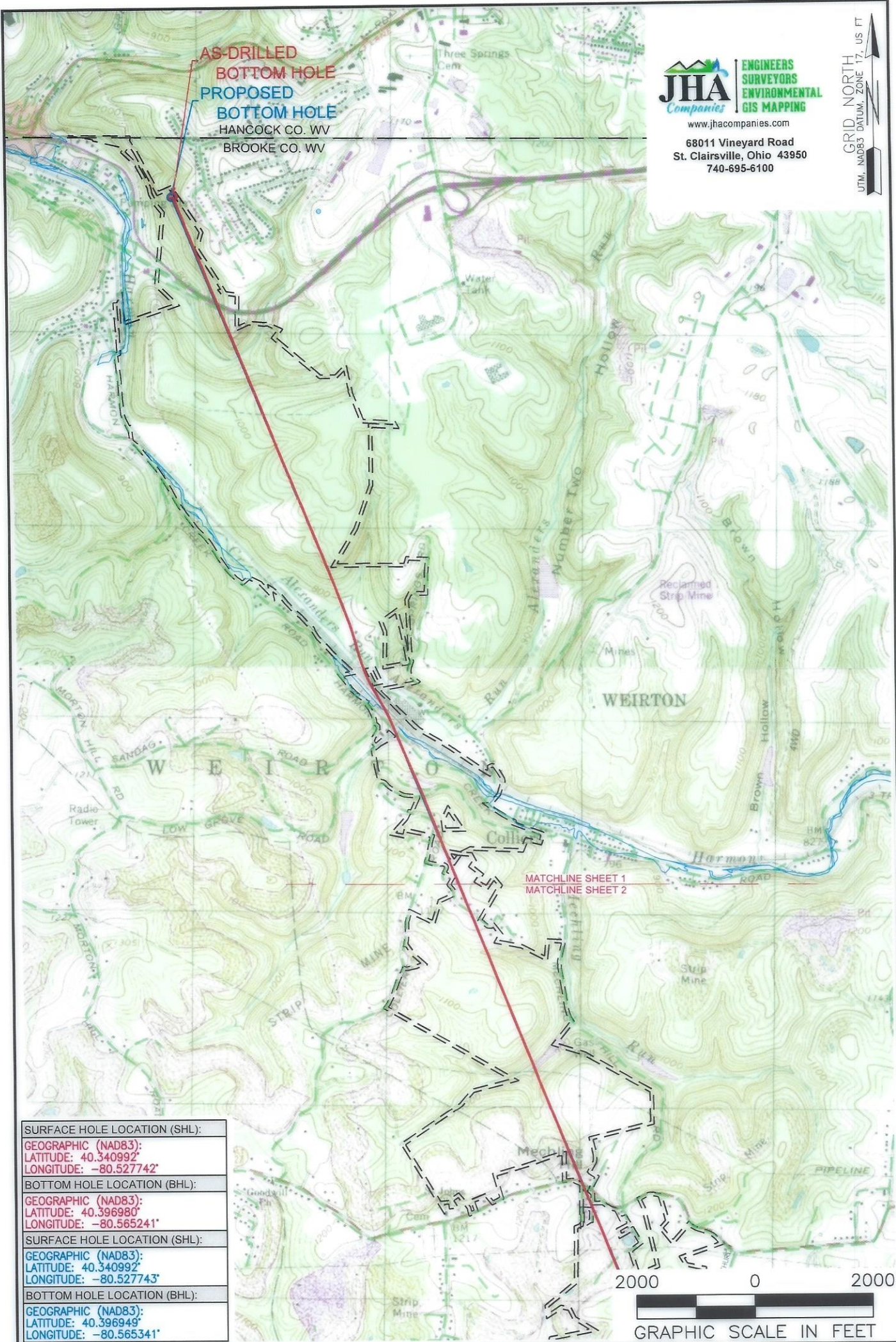
REVISIONS:				
	COMPANY:	STATE OF WV DNR B BRK		DATE: 05-31-2023
	OPERATOR'S	401H		API NO: 47-009-00333
	WELL #:			DRAWN BY: Z. WOOD
	DISTRICT:	COUNTY:	STATE:	SCALE: N/A
	CROSS CREEK	BROOKE/OHIO	WV	DRAWING NO: 2017-541
				WELL LOCATION PLAT



www.jhacompanies.com

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

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.340992' LONGITUDE: -80.527742'
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.396980' LONGITUDE: -80.565241'
SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.340992' LONGITUDE: -80.527743'
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.396949' LONGITUDE: -80.565341'

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.

LEGEND:

EXISTING BOTTOM HOLE	ACCESS ROAD
EXISTING / PRODUCING WELLHEAD	PUBLIC ROAD
EXISTING LANDING POINT LOCATION	FLOOD PLAIN
PROPOSED SURFACE HOLE / BOTTOM HOLE	AS-DRILLED PATH
PROPOSED LANDING POINT LOCATION	PROPOSED PATH

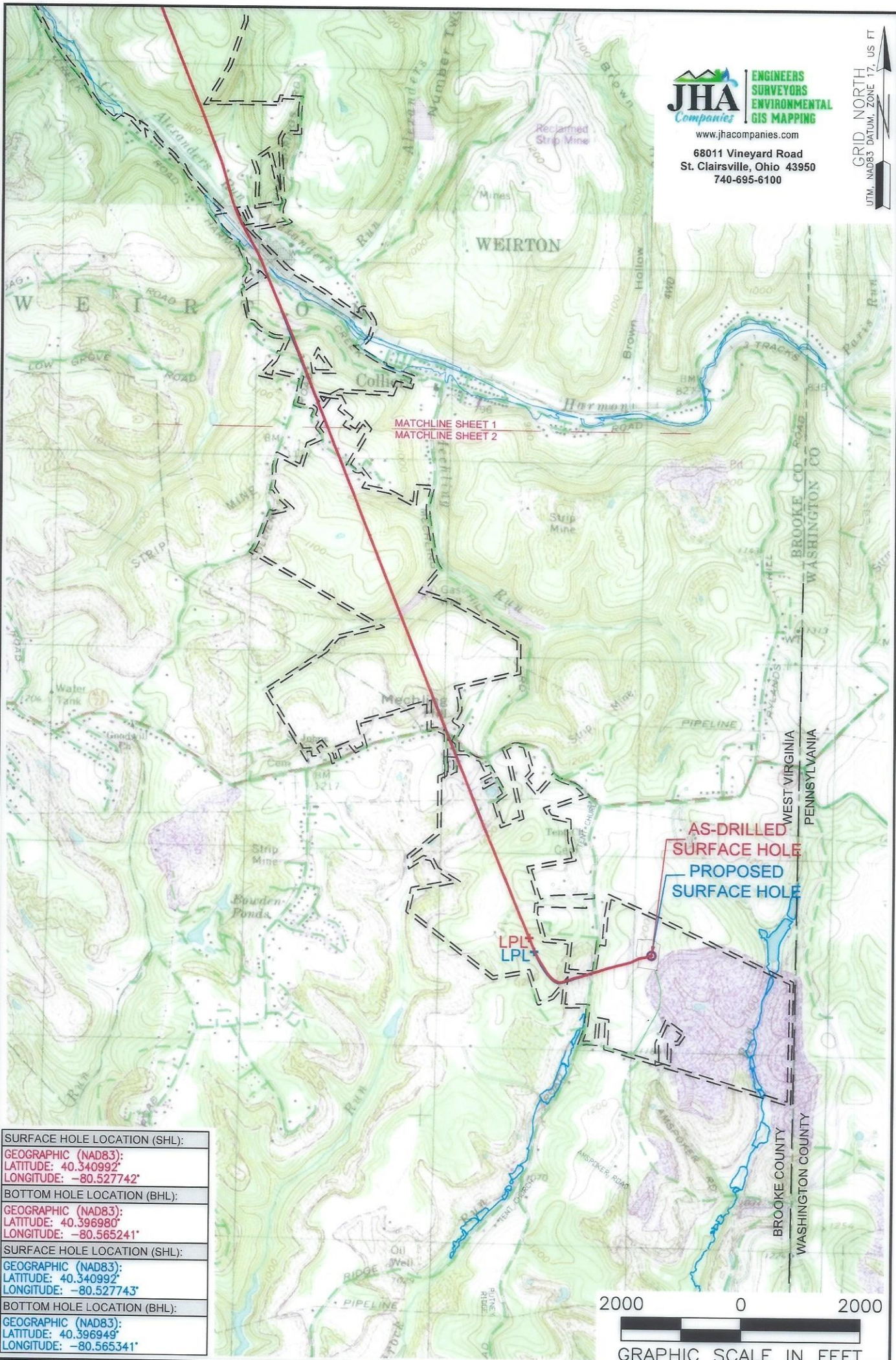
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: STATE OF WV DNR B BRK	WELL # 401H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPOND DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY: BROOKE/OHIO	CODE: 009	DISTRICT: CROSS CREEK
SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR	USGS 7 1/2 QUADRANGLE MAP NAME: STUEBENVILLE EAST		



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GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.340992'
LONGITUDE: -80.527742'
BOTTOM HOLE LOCATION (BHL):
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LATITUDE: 40.396980'
LONGITUDE: -80.565241'
SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.340992'
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BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.396949'
LONGITUDE: -80.565341'

NOTES ON SURVEY

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2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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 PLAIN
- AS DRILLED PATH
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: STATE OF WV DNR B BRK	WELL # 401H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY: BROOKE/OHIO	CODE: 009	DISTRICT: CROSS CREEK
SURFACE OWNER: STATE OF WEST VIRGINIA, BUREAU OF COMMERCE, DNR	USGS 7 1/2 QUADRANGLE MAP NAME: STEBENVILLE EAST		
		API # 47-009-00333	