

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

RBDMS ✓

API 47 - 069 - 00342 County OHIO District TRIADELPHIA
Quad VALLEY GROVE, WV Pad Name OCC A-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO Well Number OCC-A OHI 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 4,436,641.391 Easting 534,266.235
Landing Point of Curve Northing 4,436,020.469 Easting 533,750.668
Bottom Hole Northing 4,440,861.069 Easting 531,600.333

Elevation (ft) 1095.2' 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
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
SOBM

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Office of Oil and Gas
MAR 14 2023
WV Department of
Environmental Protection

Date permit issued 5/23/2022 Date drilling commenced 8/29/2022 Date drilling ceased 9/16/2022
Date completion activities began 11/7/2022 Date completion activities ceased 12/23/2022
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 393' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 586' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 462' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

Reviewed by:
MJC 3/15/2023
03/17/2023

API 47-069 - 00342 Farm name THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO Well number OCC-A OHI 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	531	NEW	J-55/54.5#		Y; 25 BBLs
Coal	SEE SURFACE CASING						
Intermediate 1	12.25	9.625	1,891	NEW	J-55/36#		Y; 28 BBLs
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	24,920	NEW	P-110 HP/20#		N
Tubing		2.875	7,518	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	520	15.60	1.19	618.8	SURFACE	8
Coal							
Intermediate 1	CLASS A	737	15.60	1.19	877.03	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4,799	14.50	1.29	6190.71	2,880'	24
Tubing							

Drillers TD (ft) 24,923' Loggers TD (ft) 24,923'

Deepest formation penetrated MARCELLUS Plug back to (ft) 24,827'

Plug back procedure N/A

Kick off depth (ft) 6,030' MD

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: 8 CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: 579 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 _____

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PRODUCING FORMATION(S)	DEPTHS		
MARCELLUS	6,176'	TVD	7,280' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,824 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 3,062 mcfpd Oil 324 bpd NGL _____ bpd Water 712 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 SPECIALIST Date 3.13.2023

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

03/17/2023



Well Name: OCC A OHI 401H

47069003420000

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	393.00	393.00	
Top of Salt Water	586.00	586.00	NA	NA	
Pittsburgh Coal	462.00	462.00	466.00	466.00	
Pottsville (ss)	608.00	608.00	651.00	651.00	
Raven Cliff (ss)	831.00	829.00	1131.00	1129.00	
Big Injun (ss)	1545.00	1537.00	2200.00	2157.00	
Berea (siltstone)	2200.00	2157.00	2227.00	2181.00	
Rhinestreet (shale)	6463.00	5613.00	6685.00	5804.00	
Cashaqua (shale)	6800.00	5896.00	6865.00	5945.00	
Middlesex (shale)	6865.00	5945.00	6973.00	6020.00	
Burket (shale)	6973.00	6020.00	7002.00	6040.00	
Tully (ls)	7002.00	6040.00	7062.00	6076.00	
Mahantango (shale)	7062.00	6076.00	7280.00	6176.00	
Marcellus (shale)	7280.00	6176.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/8/2022
Job End Date:	12/13/2022
State:	West Virginia
County:	Ohio
API Number:	47-069-00342-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	OCC A OHI 401
Latitude:	40.07934693
Longitude:	-80.59810160
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,110
Total Base Water Volume (gal):	29,110,356
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	88.77152	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	45.00000	0.27299	

			Water	7732-18-5	85.00000	0.27299	
			Water	7732-18-5	100.00000	0.27299	
FSTI-CI-02	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Ferriplex 80	SWN Well Services	Iron Control					
				Listed Below			
Tolicide 4Frac	SWN Well Services	Biocide					
				Listed Below			
PLEXSLICK 930	SWN Well Services	Friction Reducer					
				Listed Below			
Sand	SWN Well Services	Proppant					
				Listed Below			
HCL	SWN Well Services	Solvent					
				Listed Below			
Plexaid 655WG	SWN Well Services	Scale Inhibitor					
				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	10.86709	
			Hydrochloric Acid	7647-01-0	15.00000	0.03730	

			Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	45.00000	0.00460	
			Sodium Erythorbate	6381-77-7	100.00000	0.00133	
			Quaternary ammonium compounds	68424-85-1	7.50000	0.00077	
			Ethanol	64-17-5	2.50000	0.00026	
			Ethylene glycol	107-21-1	40.00000	0.00015	
			Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	10.00000	0.00004	
			Cinnamaldehyde	104-55-2	10.00000	0.00004	
			N,N-Dimethylformamide	68-12-2	10.00000	0.00004	
			Isopropyl alcohol	67-63-0	5.00000	0.00002	
			1-Decanol	112-30-1	5.00000	0.00002	
			2-Butoxyethanol	111-76-2	5.00000	0.00002	
			benzyl chloridequaternized	72480-70-7	5.00000	0.00002	
			1-Octanol	111-87-5	5.00000	0.00002	
			Triethyl phosphate	78-40-0	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)

**OCC A OHI 401H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	10/13/2022	24,827	24,731	36
2	11/9/2022	24,697	24,517	36
3	11/9/2022	24,483	24,302	36
4	11/10/2022	24,269	24,088	36
5	11/10/2022	24,055	23,874	36
6	11/12/2022	23,840	23,660	36
7	11/12/2022	23,626	23,446	36
8	11/12/2022	23,412	23,232	36
9	11/13/2022	23,198	23,018	36
10	11/13/2022	22,984	22,803	36
11	11/14/2022	22,770	22,589	36
12	11/15/2022	22,556	22,375	36
13	11/14/2022	22,342	22,161	36
14	11/17/2022	22,127	21,947	36
15	11/17/2022	21,913	21,733	36
16	11/18/2022	21,699	21,519	36
17	11/18/2022	21,485	21,305	36
18	11/19/2022	21,271	21,090	36
19	11/19/2022	21,057	20,876	36
20	11/20/2022	20,843	20,662	36
21	11/20/2022	20,628	20,448	36
22	11/21/2022	20,414	20,234	36
23	11/21/2022	20,200	20,020	36
24	11/22/2022	19,986	19,806	36
25	11/22/2022	19,772	19,591	36
26	11/22/2022	19,558	19,377	36
27	11/23/2022	19,344	19,163	36
28	11/23/2022	19,129	18,949	36
29	11/24/2022	18,915	18,735	36
30	11/24/2022	18,701	18,521	36
31	11/25/2022	18,487	18,307	36
32	11/25/2022	18,273	18,092	36
33	11/25/2022	18,059	17,878	36
34	11/26/2022	17,845	17,664	36
35	11/26/2022	17,631	17,450	36
36	11/27/2022	17,416	17,236	36
37	11/27/2022	17,202	17,022	36
38	11/28/2022	16,988	16,808	36
39	11/28/2022	16,774	16,594	36
40	11/28/2022	16,560	16,379	36
41	11/29/2022	16,346	16,165	36
42	11/29/2022	16,132	15,951	36
43	11/30/2022	15,917	15,737	36

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ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	11/30/2022	15,703	15,523	36
45	11/30/2022	15,489	15,309	36
46	12/1/2022	15,275	15,095	36
47	12/1/2022	15,061	14,880	36
48	12/2/2022	14,847	14,666	36
49	12/2/2022	14,633	14,452	36
50	12/2/2022	14,418	14,238	36
51	12/3/2022	14,204	14,024	36
52	12/3/2022	13,990	13,810	36
53	12/5/2022	13,776	13,596	36
54	12/5/2022	13,562	13,382	36
55	12/5/2022	13,348	13,167	36
56	12/6/2022	13,134	12,953	36
57	12/6/2022	12,920	12,739	36
58	12/6/2022	12,705	12,525	36
59	12/7/2022	12,491	12,311	36
60	12/7/2022	12,277	12,097	36
61	12/7/2022	12,063	11,883	36
62	12/8/2022	11,849	11,668	36
63	12/8/2022	11,635	11,454	36
64	12/9/2022	11,421	11,240	36
65	12/9/2022	11,206	11,026	36
66	12/9/2022	10,992	10,812	36
67	12/10/2022	10,778	10,598	36
68	12/10/2022	10,564	10,384	36
69	12/10/2022	10,350	10,169	36
70	12/10/2022	10,136	9,955	36
71	12/11/2022	9,922	9,741	36
72	12/11/2022	9,708	9,527	36
73	12/11/2022	9,493	9,313	36
74	12/11/2022	9,279	9,099	36
75	12/12/2022	9,065	8,885	36
76	12/12/2022	8,851	8,671	36
77	12/12/2022	8,637	8,456	36
78	12/12/2022	8,423	8,242	36
79	12/12/2022	8,209	8,028	36
80	12/13/2022	7,994	7,814	36
81	12/13/2022	7,780	7,600	36
82	12/13/2022	7,566	7,386	36

OCC A OHI 401H
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	11/8/2022	72.6	8,138	8,515	3,995	199,760	6,171	0
2	11/9/2022	86.8	8,937	4,464	3,920	310,547	9,264	0
3	11/9/2022	73.6	8,310	4,889	4,685	367,809	10,847	0
4	11/10/2022	89.1	9,234	6,340	4,340	362,880	9,301	0
5	11/12/2022	97.4	9,999	6,675	4,685	366,100	9,411	0
6	11/12/2022	92.4	9,931	6,370	4,752	367,140	9,079	0
7	11/12/2022	93.1	9,845	6,385	4,875	366,440	8,777	0
8	11/13/2022	68	6,931	6,326	4,658	363,400	11,281	0
9	11/13/2022	85.2	9,059	6,530	4,610	366,420	9,380	0
10	11/14/2022	71.2	7,614	6,930	4,408	367,960	10,946	0
11	11/14/2022	93.6	9,855	6,519	4,958	367,800	8,830	0
12	11/15/2022	89	9,789	6,266	4,580	368,660	9,479	0
13	11/16/2022	64.9	6,472	6,540	4,590	367,840	11,264	0
14	11/17/2022	96.1	9,536	6,298	4,560	365,920	8,852	0
15	11/17/2022	96.7	9,698	6,302	4,896	366,420	9,062	0
16	11/18/2022	90.7	9,459	5,982	4,798	367,520	8,451	0
17	11/18/2022	81.6	8,001	6,004	4,582	367,440	11,129	0
18	11/19/2022	95.8	9,824	6,263	4,582	367,440	8,754	0
19	11/20/2022	97.7	9,292	5,583	4,130	362,840	8,632	0
20	11/20/2022	91.6	9,319	6,251	4,687	365,920	8,686	0
21	11/21/2022	97.1	9,513	6,045	4,758	366,000	8,475	0
22	11/21/2022	72.2	7,717	6,143	4,387	362,140	9,803	0
23	11/22/2022	98.2	9,232	5,618	4,785	366,100	9,085	0
24	11/22/2022	92.5	9,105	5,890	4,300	367,800	8,355	0
25	11/22/2022	93.7	9,188	6,165	4,785	366,580	8,408	0
26	11/23/2022	71.8	6,806	6,181	4,896	367,240	9,976	0
27	11/23/2022	97.8	9,009	6,213	4,923	366,200	8,747	0
28	11/24/2022	94.6	9,130	6,782	4,882	363,700	8,354	0
29	11/24/2022	99.2	9,116	6,292	4,769	370,020	8,387	0
30	11/25/2022	94.7	8,988	6,098	5,300	368,820	8,349	0
31	11/25/2022	97.1	8,844	6,563	4,689	362,300	9,092	0
32	11/25/2022	94.1	9,136	6,270	4,784	367,680	8,229	0
33	11/26/2022	99.3	8,880	5,985	4,752	368,780	8,425	0
34	11/26/2022	93.5	8,952	6,080	4,662	365,860	8,172	0
35	11/27/2022	94.7	8,882	6,346	4,552	367,760	8,255	0
36	11/27/2022	98.8	8,919	6,839	4,852	367,780	8,135	0
37	11/27/2022	91.7	8,831	6,282	4,897	365,680	8,068	0
38	11/28/2022	98.9	8,723	6,901	4,657	364,680	8,333	0
39	11/28/2022	96.5	8,516	6,053	4,856	368,820	8,224	0
40	11/29/2022	81.7	7,908	5,960	4,352	236,780	10,308	0
41	11/29/2022	74.3	6,815	5,586	4,689	365,480	9,540	0
42	11/30/2022	63.4	5,780	5,773	4,464	366,580	10,119	0
43	11/30/2022	94.7	8,275	6,023	4,456	367,700	8,255	0
44	11/30/2022	94.5	8,617	5,912	5,260	341,980	7,649	0
45	12/1/2022	95.6	8,419	5,912	4,665	366,960	8,138	0
46	12/1/2022	99.2	8,327	5,926	4,188	374,280	8,249	0
47	12/1/2022	95.9	8,336	6,348	4,518	369,020	8,050	0
48	12/2/2022	99.2	8,238	5,568	4,695	370,560	8,081	0
49	12/2/2022	94.7	8,291	5,626	5,209	368,860	8,223	0
50	12/3/2022	95.2	8,082	5,541	4,678	371,140	8,109	0
51	12/3/2022	98.8	8,318	5,862	4,501	367,560	7,938	0
52	12/4/2022	98.8	8,169	6,004	4,356	368,840	7,871	0
53	12/5/2022	95.4	8,268	5,915	4,672	367,940	7,813	0

03/17/2023

OCC A OHI 401H
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	12/5/2022	99	8,001	5,948	4,856	368,860	8,008	0
55	12/5/2022	95.5	7,950	5,524	4,979	367,060	7,802	0
56	12/6/2022	93.1	7,538	5,989	4,792	368,300	7,749	0
57	12/6/2022	95.5	8,035	5,601	5,360	365,800	7,863	0
58	12/7/2022	95.9	7,930	5,990	4,685	366,540	7,924	0
59	12/7/2022	95.6	7,884	6,100	3,740	368,680	7,892	0
60	12/7/2022	94.1	8,176	5,980	4,729	366,160	7,830	0
61	12/8/2022	94.8	7,830	4,957	7,900	364,420	7,757	0
62	12/8/2022	98	7,811	3,142	4,620	366,640	7,952	0
63	12/8/2022	94.8	8,065	6,190	4,589	366,240	7,759	0
64	12/9/2022	94	7,675	4,200	4,600	365,600	7,897	0
65	12/9/2022	96.6	7,641	2,909	4,750	372,860	7,626	0
66	12/9/2022	95.8	7,639	5,960	4,975	368,040	8,033	0
67	12/10/2022	98	7,569	5,885	4,652	376,480	7,988	0
68	12/10/2022	98	7,551	5,844	4,467	368,540	7,792	0
69	12/10/2022	96.1	7,345	6,740	4,391	362,860	7,682	0
70	12/10/2022	96.5	7,366	6,190	4,612	368,540	7,889	0
71	12/11/2022	94.6	7,529	6,254	4,320	367,740	7,897	0
72	12/11/2022	97.8	7,512	6,740	4,520	367,180	7,685	0
73	12/11/2022	95.9	7,355	6,254	4,500	366,280	7,685	0
74	12/12/2022	95.3	7,254	5,752	4,432	368,160	7,515	0
75	12/12/2022	95.6	7,051	5,248	5,200	368,180	7,576	0
76	12/12/2022	98	7,173	5,420	4,985	368,100	7,735	0
77	12/12/2022	97.8	7,353	4,250	4,850	367,980	7,808	0
78	12/12/2022	95.7	7,152	5,832	4,420	368,580	7,606	0
79	12/13/2022	94.9	6,808	5,230	4,634	369,740	7,946	0
80	12/13/2022	97.8	7,001	4,250	4,625	367,660	7,585	0
81	12/13/2022	97.9	6,961	4,210	4,532	367,540	7,608	0
82	12/13/2022	98.4	6,973	5,727	4,620	365,480	8,018	0

03/17/2023

**JACKSON SURVEYING
INC.**

2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

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

Latitude: 40°05'00"

Latitude: 40°07'30"

SURFACE HOLE 4,133'

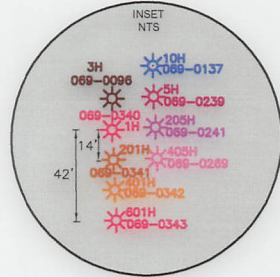
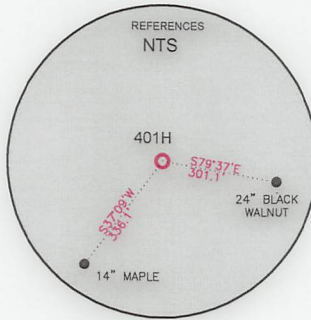
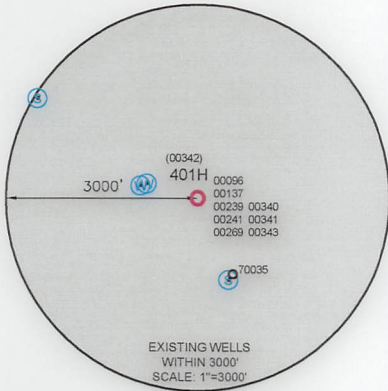
BOTTOM HOLE 1,164'



SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,641.323 EASTING: 534,266.082
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,022.937 EASTING: 533,749.347
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,440,862.802 EASTING: 531,606.221

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 80°42'17" E	1867.65'	SHL TO LANDMARK	FD. 7" PIPE
L2	S 07°00'36" W	1477.96'	SHL TO LANDMARK	FD. 6" SYCAMORE
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L3	S 39°42'13" W	2647.84'	3625.02'	SHL TO LP

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,641.391 EASTING: 534,266.235
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,020.469 EASTING: 533,750.668
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,440,861.069 EASTING: 531,600.333



WELL RESTRICTIONS

- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
- PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

- 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.
- ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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. 708

David L Jackson



2000 0 2000

GRAPHIC SCALE IN FEET

COMPANY: **SWN** **SWN** *R² A → V⁺*
Production Company, LLC Production Company™

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	OCC-A OH		
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	OPERATOR'S WELL #:	401H	
			API WELL #:	47	069
				STATE	COUNTY
					PERMIT
					00342

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

WATERSHED: RONEY POINT RUN OF LITTLE WHEELING CREEK OF WHEELING CREEK (HUC-10) ELEVATION: 1095.2'

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

SURFACE OWNER: THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO ACREAGE: ±262.85

OIL & GAS ROYALTY OWNER: THE BOARD OF COMMISSIONERS OF THE COUNTY OF OHIO ACREAGE: ±262.85

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

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) **ASDRILLED** **03/17/2023**

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,221 TVD 24,923 TMD

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

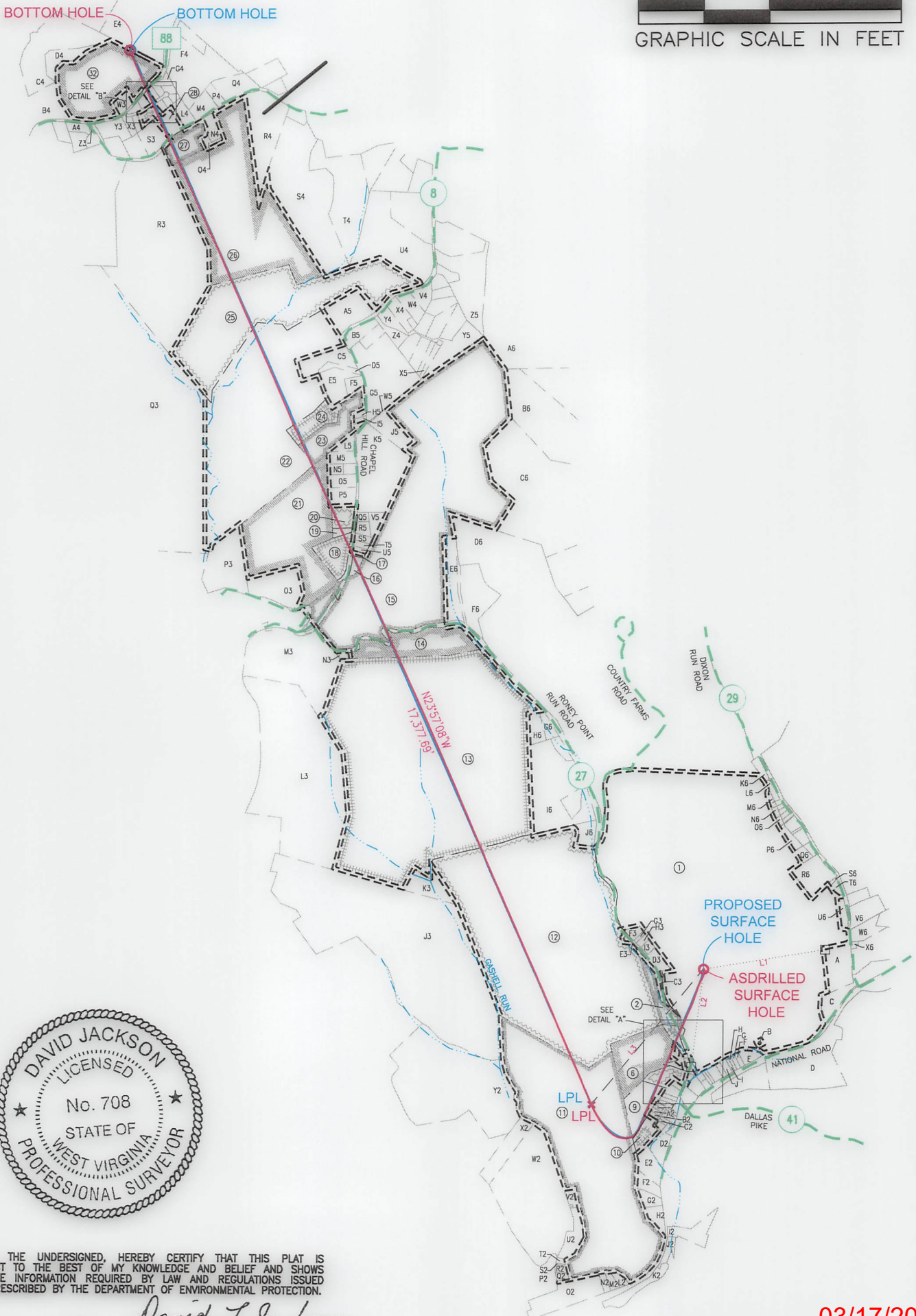
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200

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

LEGEND:	<ul style="list-style-type: none"> ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ★ EXISTING / PRODUCING WELLHEAD LPL★ LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊕ EXISTING SPRING — SURVEYED BOUNDARY — DRILLING UNIT == LEASE BOUNDARY — ASDRILLED PATH — PROPOSED PATH 	REVISIONS:	DATE: 01-13-2023
			DRAWN BY: N. MANO
			SCALE: 1" = 2000'
			DRAWING NO:
			WELL LOCATION PLAT

Longitude: 80°37'30" BOTTOM HOLE 2,744'
Longitude: 80°35'00" SURFACE HOLE 1,452'

JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
 304-623-5851



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P.S. 708

David L Jackson

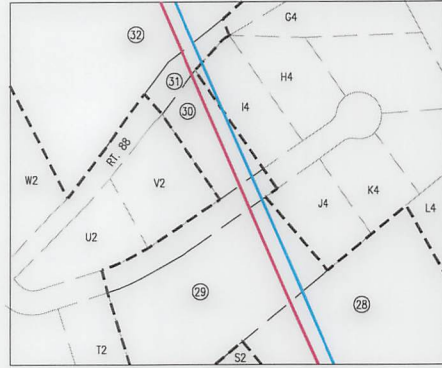
03/17/2023

REVISIONS:		COMPANY:	
OPERATOR'S	OCC-A OHI	API:	DATE: 01-13-2023
WELL #:	401H	47-069-00342	DRAWN BY: N. MANO
DISTRICT:	COUNTY:	STATE:	SCALE: N/A
TRIADELPHIA	OHIO	WV	DRAWING NO:
			WELL LOCATION PLAT 2

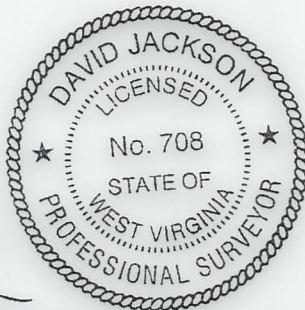
JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
 304-623-5851

WELL BORE TRACTS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	BOARD OF COMM OHIO CO (S/R)	3-L13-3
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	HANNING RANDY & BRENDA (S)	6-T3-5.2
3	HUNTER JOHN A & C M (S)	6-T3Q-12
4	WV DEPARTMENT OF TRANSPORTATION (S)	ROUTE 27
5	HUNTER JOHN A & C M (S)	6-T3Q-11
6	BEABOUT RUSSELL W (S)	6-T3Q-8
7	MULLOOLY JAMES F (S)	6-T3Q-7.1
8	FISCHER PAMELA (S)	6-T3Q-6
9	PARSONS JOSEPH L & SALLY (S)	6-T3P-1
10	PARSONS JOSEPH L & SALLY (S)	6-T8B-1
11	CROW RAYMOND E (S)	6-T8-7
12	MINCH TIMMY B & AMY LYNN (S)	6-T3-5
13	OGLEBAY FOUNDATION PROPS INC ANNA C MAXWELL REV TRUST (S)	3-L13-1
14	MAXWELL JOSEPH E ANNA C MAXWELL REVOCABLE TRUST (S)	3-L13-1.2
15	LUCHETTI ROBERT R SR - TOD (S)	4-L10-23
16	MILLER CALVIN F & B J (S)	4-L10-25.1
17	MILLER WILSON B (S)	4-L10-25
18	LUCHETTI ROBERT R SR - TOD (S)	4-R15-28.4
19	WOOD MATHEW J (S)	4-R15-28.6
20	WOOD MATHEW J (S)	4-R15-28.3
21	LUCHETTI ROBERT R SR - TOD (S)	4-R15-28
22	PORTER SANDRA K (S)	4-R15-25
23	A D BAKER HOMES INC (S)	3-L10-19
24	SMITH PRESTON T & SARAH J (S)	3-L10-19.6
25	GOMPERS EDWARD D AND LINDA M (S)	4-R15-25.1
26	SIXTY FOUR LLC (S)	4-R15-21
27	DICKINSON JAMES F; ET AL (S)	4-R15-23
28	SHACKELFORD HOWARD L & B M (S)	4-R15-20.3
29	GENTILE ANTHONY J CHAPPANO RITA M (S)	4-R12-10.13
30	MARTIN TIMOTHY A & J M (S)	4-R12-10.6
31	WV DEPARTMENT OF TRANSPORTATION (S)	ROUTE 88
32	MULL W QUAY II TRUST (S)	4-R12-10.14

DETAIL "B"



DETAIL "A"



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P.S. 708

David L Jackson

03/17/2023

REVISIONS:	COMPANY:		
	OPERATOR'S	OCC-A OHI	API:
	WELL #:	401H	47-069-00342
	DISTRICT:	COUNTY:	STATE:
	TRIADELPHIA	OHIO	WV
			DATE: 01-13-2023
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 3



**JACKSON SURVEYING
INC.**

2413 EAST PIKE ST. # 112
Clarksburg, WV 26302
304-623-5851

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	OHIO COUNTY COMMISSION	6-T3-28
B	VILLAGE OF VALLEY GROVE	6-T3Q-27
C	JDS INVESTMENTS LLC	6-T3-16
D	GARRISON MELODY	6-T3-33
E	BUPERIOR INDUSTRIAL LAUNDRIES INC	6-T3Q-26
F	STEPHAN PAULA C AND ORION E	6-T3Q-25
G	FISHER LOGAN J	6-T3Q-24
H	CLARK ROBERT B & EVELYN M	6-T3Q-23
I	SWAIN MARVIN H & K L	6-T3Q-22
J	PHK LLC	6-T3Q-21
K	HAMMONS TAMMY M	6-T3Q-20
L	MCDANIELS EDDIE L & MCDANIELS TRACY L	6-T3Q-19
M	P-3 EQUITIES LLC	6-T3Q-18.1
N	FLACK HOLLY M	6-T3Q-18
O	MCKENNEN JOSEPH A III	6-T3Q-17
P	BOARD OF COMM OHIO CO	6-T3Q-13
Q	FISCHER DONALD R JR	6-T3Q-7.2
R	VALLEY COIN MACHINE COMPANY LLC	6-T3Q-16
S	MARQUART GREGORY F & L A; MARQUART PHILLIP J & K L	6-T3Q-15
T	HARVATH PATRICIA H	6-T3Q-4
U	HOWARD DANIEL K; HOWARD E J HOWARD D; HOWARD A J	6-T3Q-4.1
V	VELAS JEREMY L & CARRIE L	6-T3Q-3
W	YAHN MARY E & RAYMOND C	6-T3Q-2
X	PACK AUSTIN M	6-T3Q-2.1
Y	PACK AUSTIN M	6-T8B-7
Z	LANGMYER KEVA FAWN	6-T8B-6
A2	HALEY ROBERT M & MICHELLE L HALEY	6-T8B-4.1
B2	NASH JOHN R JR & PAMELA L	6-T8B-4
C2	SPRY MICHAEL & LINDA	6-T8B-8
D2	LINDHEIMER KENNETH A	6-T8B-11
E2	NORMAN HOLLY LYNN	6-T8-8.2
F2	GREEN GLORIA J & DAVID M	6-T8-8.3
G2	MURRAY KENNETH W SR & WILBUR E JR	6-T8-8
H2	CROW RAYMOND & SANDRA LEE	6-T8-8.4
I2	EDGELL DEBORAH A	6-T8-32
J2	EDGELL JOSEPH P & S J EDGELL EARL F (LIFE ESTATE)	6-T8-56
K2	PHK LLC	6-T8-58
L2	CROW RAYMOND & SANDRA	6-T8-7.3
M2	CROW RAYMOND & SANDRA L	6-T8-7.4
N2	CROW RAYMOND E JR & RANEE E	6-T8-7.2
O2	LD REALTY INC	6-T8-3
P2	LD REALTY INC	6-T8-3.9
Q2	SCHREIBER JEREMY	6-T8-6.3
R2	PRITT SARAH	6-T8-6.2
S2	MATTIS KIM S & FAYE	6-T8-6.4
T2	MATTIS KIM S & FAYE	6-T8-6.1
U2	PETTIT DEBORAH	6-T8-3.3
V2	PETTIT DEBORAH	6-T8-60
W2	MARSHALL JASON A AND NICOLE D	6-T8-6.5
X2	BOREMAN THOM O & M E	6-T8-6
Y2	GOMPERS JAMES C C/O GOMPERS & ASSOCIATES	6-T3-4.2
Z2	NELSON KENNETH L	6-T3Q-10
A3	HUNTER JOHN A & C M	6-T3Q-11.1
B3	BEHRENS WM D	6-T3Q-9
C3	HANNING RANDY DALE & BRENDA JOYCE	6-T3-5.1
D3	BOARD OF COMMISSIONERS	6-T3-10
E3	KETRON TRACY E & JOHN P	6-T3-7.1
F3	SHORES BARBARA A	6-T3-9
G3	HUGHES JAMES R & DARLA J	6-T3-8
H3	KETRON TRACY E & JOHN P	6-T3-7
I3	DERR ALFRED	6-T3-6
J3	SCOTT PAUL R & JOYCE A	6-T3-3
K3	HATCHER EDWARD A	3-L13-1.5
L3	MILLER FAMILY TRUST	4-R18-11
M3	LUCHETTI ROBERT R JR & TERESA	4-R18-29
N3	OGLEBAY FOUNDATION PROPS INC MAXWELL ANNA C REV TRUST	3-L13-1.1
O3	CRONIN CHEYENNE & AMY	4-R15-28.5
P3	VESPA JOSEPH L	4-R15-28.2
Q3	NICHOLS R E 3/8 INT, B L SNAPP 3/8 INT & M C NICHOLS 1/4 INT	4-R15-16
R3	YOUNG TRAVIS & MICHELLE E	4-R15-19
S3	MILLER HAROLD J JR & S D	4-R15-20
T3	ZANDO ZACHARY D & ASHLEY A	4-R12-10.5
U3	MCCULLOUGH RHONDA JO	4-R12-10.12

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
V3	WELLING JAYSON & KARA C	4-R12-10.1
W3	GAUDIO ROBERT & CLARE MCDONALD	4-R12-11
X3	MENGEU BRIAN R & LISA M	4-R12-10.9
Y3	FORD G QUINN & M A	4-R12-10.3
Z3	WEST RENTALS INC	4-R15-32
A4	KUREISHY ZAVEEN A	4-R15-32.2
B4	OGLEBAY FOUNDATION PROPS INC	4-R12-10.2
C4	WEST RENTALS INC	4-R12-10.16
D4	MULL W QUAY II TRUST	4-R12-10.17
E4	MULL W QUAY II TRUST	4-R12-12
F4	WEISS ROBERT L AND PATRICIA J IRREVOCABLE TRUST	4-R12-46
G4	FRANKLIN WOODS ESTATES HOMEOWNERS ASSC INC	4-R12-10.11
H4	STRAUB ENTERPRISES INC	4-R12-10.4
I4	MARTIN TIMOTHY A & JANICE M (S)	4-R12-10.10
J4	WHEELER MARK R & PATRICIA	4-R12-10.15
K4	WHEELER MARK R & PATRICIA A	4-R12-10.7
L4	SHACKLFORD HOWARD L & B M	4-R12-10.5
M4	MCCULLY BRIAN G	4-R12-47.2
N4	DICKINSON DANIEL W JR & G K	4-R15-21.1
O4	DICKINSON DANIEL W JR	4-R15-21.2
P4	DUNAWAY MEGAN R & BENJAMIN J	4-R12-47.1
Q4	FLANAGAN JILL E & JOSEPH V JR	4-R12-47
R4	WITSBERGER AMY LISBETH	4-R15-22
S4	TEMPLETON JOHN J DR & LISA J CO-TRUSTEES	4-R15-23.3
T4	REGAN CHRISTOPHER J & HILARY E	4-R15-23.4
U4	KOWCHECK DRAKE M & CAITLIN	4-R15-25.6
V4	HARRIS RICHARD D & PATRICIA	3-L10-17.2
W4	VAN DUSEN JOHN M II & VAN DUSEN AMANDA RAE	3-L10-17.1
X4	DERROW STEPHEN J	3-L10-17.4
Y4	HERCULES EUGENE & CARMELINDA S	3-L10-18
Z4	HUFFNER EARL P	3-L10-17.12
A5	MARRINER ROBYN LEE	3-L10-51
B5	WHITE KRISTIAN E & NICOLE	3-L10-19.1
C5	PORTER SANDRA K - TOD	4-R15-25.5
D5	PORTER MARK E PORTER BARBARA V	4-R15-25.4
E5	PORTER MARK E & BARBARA V	4-R15-25.3
F5	HAMMERQUIST KAREN L	3-L10-52
G5	WHITE KRISTIAN E & NICOLE R	3-L10-19.3
H5	KOCH MARY C	4-L10-21
I5	KOCH MARY C	4-L10-22
J5	LUCHETTI ROBERT R JR & TERESA	3-L10-19.5
K5	A D BAKER HOMES INC	3-L10-19.4
L5	A D BAKER HOMES INC	4-R15-26
M5	SIMONS WILLIAM JR & THERESA M	4-R15-26.2
N5	DIBARTOLOMEO ROBERT	4-R15-33
O5	NEUMANN KAREN JENINE	4-R15-28.7
P5	ROGERSON RONALD EDWIN	4-R15-28.1
Q5	BAIER MARK T SR & DARLENA M	3-L10-25.6
R5	WOOD MATHEW J & MARIA M	3-L10-25.2
S5	CAREY WAYNE L	4-L10-25.3
T5	MATTERN KENNETH MARK & MATTERN DANA ANN	3-L10-25.4
U5	MILLER CALVIN F & BARBARA J	3-L10-25.5
V5	WOOD MATHEW J & MARIA M	3-L10-25.7
W5	WHITE KRISTIAN E & NICOLE R	3-L10-23.2
X5	MACNEALY JON A AND KAREN L	3-L10-17.13
Y5	PALMER LOUIS III	3-L10-17.16
Z5	STINGLE KEVIN W & NICOLE A	3-L10-13.2
A6	WALTERS GLEN L & R S	3-L10-28
B6	BYRUM CAROLINE LOUSTAU	3-L10-27.3
C6	ABRAHAM THOMAS R & S O	3-L10-26
D6	BOARD OF COMM OHIO CO	3-L13-3.1
E6	WEIR ROBERT AND BRIDGET	3-L10-23.1
F6	OHIO COUNTY COMMISSION	3-L10-23.3
G6	BENNETT JEFFREY R	3-L13-2.2
H6	WALTON LISA	3-L13-2.3
I6	MINCH TIMMY B & AMY LYNN	3-L13-2
J6	SHELLER CARL J	3-L13-24
K6	STEVENSON KIMBERLY; STEVENSON JAMES; DELGADO BRENDA STEVENSON	3-L13-6.1
L6	LOVERIDGE TYSON L & VANESSA	3-L13-6
M6	LOVERIDGE TYSON L & VANESSA	3-L13-6.4
N6	WHEELER JAMES E III & WHEELER CHRISTINE	3-L13-8.2
O6	WHEELER JAMES E JR & B J	3-L13-9
P6	WHEELER JOLLY W SR & SARAH JANE (LE); ET AL	3-L13-12.3
Q6	SHEARER STEVEN P	3-L13-12.1
R6	KNIGHT JAMES C & D L	3-L13-13
S6	DEMERSKI GARY L & MARY C	3-L13-14
T6	BARON KEITH E & C J	3-L13-15
U6	HOLMAN HARRY E & CHERYL L	6-T3-11
V6	HOLMAN CHERYL L & H E	6-T3-13
W6	MOORE GERALD T & A M	6-T3-14
X6	MOORE GERALD T & A M	6-T3-14.1

03/17/2023

REVISIONS:	COMPANY:		
			
	OPERATOR'S	OCC-A OHI	API:
	WELL #:	401H	47-069-00342
	DISTRICT:	COUNTY:	DATE: 01-13-2023
	TRIADELPHIA	OHIO	DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 4