

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

API 47051025050000 County MARSHALL District SAND HILL
Quad MOUNDSVILLE, WV Pad Name BETTY SCHAFFER-MSH-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm Name ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER Well Number BETTY SCHAFFER MSH 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 NAD83/UTM Attach an as-drilled plat, profile view, and deviation survey

Landing Point of Curve
Top Hole Northing 4426807.471 Easting 531110.370
Northing 4426468.599 Easting 530304.020
Bottom Hole Northing 4433219.805 Easting 527402.742

Elevation (ft) 848.7' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviate Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrill Re-Work 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
See attached Mud Summary Report

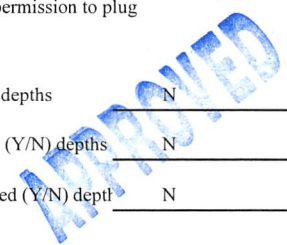
Date permit issued 2023-09-06 Date drilling commenced 2024-03-26 Date drilling ceased 2024-04-13

Date Completion activities began 2024-04-26 Date Completion activities ceased 2024-06-09

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 280' Oprn mine(s) (Y/N) depths N
Salt water depth(s) ft 802' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 355' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N



Reviewed by: [Signature]
RECEIVED
Office of Oil and Gas

JUL 16 2024

API 47051025050000

Farm name ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER Well number BETTY SCHAFFER MSH 401H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Wt lb/ft	Grade	Basket Depth	Did cement circulate (Y/N) *Provide details below*
Conductor	20.000	20.000	126	NEW	94.00	J-55		Y
Surface	17.500	13.375	391	NEW	54.50	J-55	N/A	Y/ 23 BBLS
Coal	SEE SFC CSG							
Intermediate 1	12.250	9.625	1756	NEW	36.00	J-55		Y/ 24 BBLS
Intermediate 2								
Intermediate 3								
Production	8.500	5.500	31244	NEW	20.00	P-110		Y/ 105 BBLS
Tubing		2.875	7114	NEW	6.50	P-110		
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 ²)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	421	15.6	1.19	500.99	SURFACE	8
Coal							
Intermediate 1	CLASS A	614	15.6	1.18	724.52	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	6050	14.5	1.29	7804.5	SURFACE	24
Tubing							

Drillers TD (ft) 31266

Loggers TD (ft) 31266

Deepest formation penetrated MARCELLUS

Plug back to (ft) 31159

Plug back procedure N/A

Kick off depth (ft 6059' MD) _____

Check all wireline logs run caliper density deviated/directional induction sonic
 neutron resistivity gamma ray temperature

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING:

SURFACE: 5 CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: 22 CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: 675 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 AS OPEN HOLE Yes No Details _____

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

RECEIVED
Office of Oil and Gas

JUL 16 2024

WV Department of
Environmental Protection
10/18/2024

JUL 16 2024

BETTY SCHAFER MSH 401H
ATTACHMENT 1
PERF REPORT

WV Department of
Environmental Protection

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	4/23/2024	31,159	31,068	36
2	4/27/2024	31,032	30,855	36
3	4/27/2024	30,822	30,646	36
4	4/27/2024	30,613	30,436	36
5	4/28/2024	30,403	30,226	36
6	4/28/2024	30,193	30,017	36
7	4/28/2024	29,984	29,807	36
8	4/29/2024	29,774	29,598	36
9	4/29/2024	29,565	29,388	36
10	4/29/2024	29,355	29,178	36
11	4/30/2024	29,145	28,969	36
12	4/30/2024	28,936	28,759	36
13	4/30/2024	28,726	28,549	36
14	4/30/2024	28,516	28,340	36
15	5/1/2024	28,307	28,130	36
16	5/1/2024	28,097	27,920	36
17	5/1/2024	27,888	27,711	36
18	5/1/2024	27,678	27,501	36
19	5/2/2024	27,468	27,292	36
20	5/2/2024	27,259	27,082	36
21	5/2/2024	27,049	26,872	36
22	5/2/2024	26,839	26,663	36
23	5/3/2024	26,630	26,453	36
24	5/3/2024	26,420	26,243	36
25	5/3/2024	26,210	26,034	36
26	5/3/2024	26,001	25,824	36
27	5/3/2024	25,791	25,615	36
28	5/4/2024	25,582	25,405	36
29	5/4/2024	25,372	25,195	36
30	5/4/2024	25,162	24,986	36
31	5/4/2024	24,953	24,776	36
32	5/4/2024	24,743	24,566	36
33	5/5/2024	24,533	24,357	36
34	5/5/2024	24,324	24,147	36
35	5/5/2024	24,114	23,937	36
36	5/6/2024	23,905	23,728	36
37	5/6/2024	23,695	23,518	36
38	5/6/2024	23,485	23,309	36
39	5/6/2024	23,276	23,099	36
40	5/6/2024	23,066	22,889	36
41	5/7/2024	22,856	22,680	36
42	5/7/2024	22,647	22,470	36

**BETTY SCHAFFER MSH 401H
ATTACHMENT 1
PERF REPORT**

RECEIVED
Office of Oil and Gas

JUL 16 2024

Department of
Environmental Protection

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
43	5/7/2024	22,437	22,260	36
44	5/7/2024	22,227	22,051	36
45	5/7/2024	22,018	21,841	36
46	5/7/2024	21,808	21,632	36
47	5/7/2024	21,599	21,422	36
48	5/8/2024	21,389	21,212	36
49	5/8/2024	21,179	21,003	36
50	5/8/2024	20,970	20,793	36
51	5/8/2024	20,760	20,583	36
52	5/8/2024	20,550	20,374	36
53	5/9/2024	20,341	20,164	36
54	5/9/2024	20,131	19,954	36
55	5/9/2024	19,922	19,745	36
56	5/9/2024	19,712	19,535	36
57	5/9/2024	19,502	19,326	36
58	5/9/2024	19,293	19,116	36
59	5/10/2024	19,083	18,906	36
60	5/10/2024	18,873	18,697	36
61	5/10/2024	18,664	18,487	36
62	5/10/2024	18,454	18,277	36
63	5/10/2024	18,244	18,068	36
64	5/11/2024	18,035	17,858	36
65	5/11/2024	17,825	17,649	36
66	5/11/2024	17,616	17,439	36
67	5/11/2024	17,406	17,229	36
68	5/11/2024	17,196	17,020	36
69	5/11/2024	16,987	16,810	36
70	5/11/2024	16,777	16,600	36
71	5/12/2024	16,567	16,391	36
72	5/12/2024	16,358	16,181	36
73	5/12/2024	16,148	15,971	36
74	5/12/2024	15,939	15,762	36
75	5/12/2024	15,729	15,552	36
76	5/12/2024	15,519	15,343	36
77	5/12/2024	15,310	15,133	36
78	5/13/2024	15,100	14,923	36
79	5/13/2024	14,890	14,714	36
80	5/13/2024	14,681	14,504	36
81	5/13/2024	14,471	14,294	42
82	5/13/2024	14,261	14,085	36
83	5/13/2024	14,052	13,875	36
84	5/14/2024	13,842	13,666	36

BETTY SCHAFER MSH 401H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
85	5/14/2024	13,633	13,456	36
86	5/14/2024	13,423	13,246	36
87	5/14/2024	13,213	13,037	36
88	5/14/2024	13,004	12,827	36
89	5/14/2024	12,794	12,617	36
90	5/15/2024	12,584	12,408	36
91	5/15/2024	12,375	12,198	36
92	5/15/2024	12,165	11,988	36
93	5/15/2024	11,956	11,779	36
94	5/15/2024	11,746	11,569	36
95	5/16/2024	11,536	11,360	36
96	5/16/2024	11,327	11,150	36
97	5/16/2024	11,117	10,940	36
98	5/16/2024	10,907	10,731	36
99	5/16/2024	10,698	10,521	36
100	5/17/2024	10,488	10,311	36
101	5/17/2024	10,278	10,102	36
102	5/17/2024	10,069	9,892	36
103	5/17/2024	9,859	9,683	36
104	5/17/2024	9,650	9,473	36
105	5/17/2024	9,440	9,263	36
106	5/17/2024	9,230	9,054	36
107	5/17/2024	9,021	8,844	36
108	5/18/2024	8,811	8,634	36
109	5/18/2024	8,601	8,425	36
110	5/18/2024	8,392	8,215	36
111	5/18/2024	8,182	8,005	36
112	5/18/2024	7,973	7,796	36
113	5/18/2024	7,763	7,586	36
114	5/18/2024	7,553	7,377	36
115	5/18/2024	7,344	7,167	36

RECEIVED
Office of Oil and Gas

JUL 16 2024

WV Department of
Environmental Protection

JUL 16 2024

BETTY SCHAFER MSH 401H
ATTACHMENT 2
STIM REPORT

WV Department of
Environmental Protection

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othr
1	4/26/2024	76.1	8,710	6,787	3,520	196,400	6,530	0
2	4/27/2024	82.5	9,606	5,394	4,469	369,020	12,239	0
3	4/27/2024	80	8,520	5,614	4,515	368,080	10,582	0
4	4/28/2024	83	9,088	5,345	4,277	369,780	10,506	0
5	4/28/2024	76.3	8,300	5,460	5,169	366,180	11,578	0
6	4/28/2024	80.3	9,444	6,001	4,510	367,840	9,666	0
7	4/29/2024	75.1	9,406	5,701	4,477	369,660	9,721	0
8	4/29/2024	78.7	9,400	6,419	4,898	368,220	9,373	0
9	4/29/2024	75.9	9,266	6,131	4,987	364,340	9,201	0
10	4/29/2024	83.6	6,272	5,270	4,577	372,000	12,603	0
11	4/30/2024	81.4	8,541	6,641	4,898	365,960	9,281	0
12	4/30/2024	82.5	9,648	5,314	4,469	367,320	9,121	0
13	4/30/2024	80.5	9,226	5,005	4,178	367,280	8,945	0
14	5/1/2024	81.4	9,518	5,741	4,441	368,520	8,901	0
15	5/1/2024	81.5	8,868	4,965	4,832	367,780	8,437	0
16	5/1/2024	83.7	9,697	6,745	4,198	367,840	8,753	0
17	5/1/2024	81.4	9,482	5,756	4,441	364,940	8,501	0
18	5/2/2024	78.8	8,759	6,340	4,497	367,840	8,577	0
19	5/2/2024	78.7	8,516	6,707	4,798	365,280	8,731	0
20	5/2/2024	82.2	9,862	6,844	4,598	370,640	8,610	0
21	5/2/2024	86.9	9,321	4,986	3,647	367,840	8,471	0
22	5/2/2024	87.9	9,559	4,777	3,499	371,800	8,427	0
23	5/3/2024	87.2	9,706	5,658	4,522	367,840	8,433	0
24	5/3/2024	89.1	9,569	4,601	5,100	369,080	8,661	0
25	5/3/2024	77.6	8,810	7,391	4,225	370,100	8,604	0
26	5/3/2024	85.1	9,543	6,134	3,566	372,920	8,613	0
27	5/4/2024	87.9	9,695	5,077	3,500	368,640	8,402	0
28	5/4/2024	90.8	9,736	6,010	4,498	369,340	8,444	0
29	5/4/2024	83.7	9,344	6,352	4,305	368,200	8,472	0
30	5/4/2024	88.5	9,414	4,923	4,322	367,700	8,419	0
31	5/4/2024	83.1	8,870	4,117	4,980	364,580	8,370	0
32	5/5/2024	84.7	9,030	6,950	3,765	367,640	8,514	0
33	5/5/2024	90.9	9,724	6,559	3,982	367,480	8,374	0
34	5/5/2024	82.6	8,235	4,715	4,600	367,900	8,408	0
35	5/6/2024	87.5	8,920	4,639	3,855	367,360	8,288	0
36	5/6/2024	92.8	9,690	5,424	4,432	366,640	8,227	0
37	5/6/2024	88.6	8,627	4,290	4,432	367,500	8,284	0
38	5/6/2024	80.5	8,539	3,960	3,968	370,560	8,163	0
39	5/6/2024	89	9,033	4,002	4,054	361,420	8,107	0
40	5/6/2024	79	8,065	6,064	3,514	364,540	8,310	0
41	5/7/2024	84.9	8,792	4,269	3,521	366,350	8,144	0
42	5/7/2024	77.3	8,233	4,310	4,450	367,500	8,086	0
43	5/7/2024	77.4	8,593	6,152	4,298	369,080	8,143	0
44	5/7/2024	88	9,154	4,750	4,412	366,580	8,070	0
45	5/7/2024	93.3	8,914	4,225	4,255	367,560	8,115	0
46	5/7/2024	96.2	9,319	4,145	4,751	366,410	8,053	0
47	5/7/2024	90.3	9,017	5,336	4,388	368,080	7,994	0
48	5/8/2024	86.4	8,409	4,132	6,121	365,640	7,805	0
49	5/8/2024	88.6	8,194	4,215	5,162	367,120	8,312	0
50	5/8/2024	81.1	7,805	4,871	5,361	367,540	8,227	0
51	5/8/2024	93.7	8,474	6,293	5,841	367,060	8,189	0
52	5/8/2024	96	8,912	4,541	5,713	368,900	8,214	0
53	5/9/2024	96	8,711	4,542	5,124	369,120	8,194	0

10/18/2024

JUL 16 2024

BETTY SCHAFFER MSH 401H
ATTACHMENT 2
STIM REPORT

WV Department of
Environmental Protection

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Environmental Protection nitrogen/other
54	5/9/2024	96.5	8,708	4,506	5,175	367,200	8,157	0
55	5/9/2024	94.3	8,505	5,680	5,714	368,440	8,171	0
56	5/9/2024	94.3	8,536	4,568	4,475	368,920	8,250	0
57	5/9/2024	97.4	9,010	2,795	5,562	368,080	7,967	0
58	5/9/2024	96	9,430	5,611	5,285	367,940	7,929	0
59	5/10/2024	98.5	9,240	6,028	5,394	367,660	8,039	0
60	5/10/2024	86.9	8,522	4,875	5,169	369,640	8,125	0
61	5/10/2024	86.5	8,307	6,347	5,841	368,580	7,986	0
62	5/10/2024	96	8,943	4,033	5,463	366,320	8,032	0
63	5/10/2024	96	8,899	4,875	4,832	367,620	7,978	0
64	5/11/2024	96	9,174	6,030	5,123	366,780	7,942	0
65	5/11/2024	93	8,426	5,483	5,074	367,960	8,007	0
66	5/11/2024	92	8,273	6,401	5,653	367,620	7,965	0
67	5/11/2024	96.1	8,237	5,233	5,608	366,980	7,854	0
68	5/11/2024	96.4	8,528	5,933	3,953	367,740	7,840	0
69	5/11/2024	96	8,366	4,362	4,871	364,760	7,904	0
70	5/11/2024	95	8,976	6,078	5,211	366,420	7,856	0
71	5/12/2024	90	8,103	3,841	4,931	369,460	7,886	0
72	5/12/2024	90	8,039	3,921	5,362	370,280	7,827	0
73	5/12/2024	90.4	7,814	4,569	5,528	368,460	7,811	0
74	5/12/2024	89.5	7,897	4,154	5,241	367,240	7,581	0
75	5/12/2024	97.3	8,255	4,259	5,482	365,180	7,674	0
76	5/12/2024	96	8,636	5,195	5,463	364,120	7,312	0
77	5/12/2024	97	8,725	5,971	5,217	368,140	7,648	0
78	5/13/2024	96	8,483	5,663	5,617	368,960	7,754	0
79	5/13/2024	96	8,329	3,658	5,098	365,160	7,489	0
80	5/13/2024	91	7,913	4,263	5,407	364,990	7,573	0
81	5/13/2024	91.1	7,491	4,721	4,876	368,680	8,272	0
82	5/13/2024	96	8,698	3,892	5,813	369,740	7,551	0
83	5/14/2024	90	7,614	4,196	5,274	366,820	7,474	0
84	5/14/2024	90	7,521	4,360	5,069	367,640	7,489	0
85	5/14/2024	90.6	7,318	4,612	5,736	368,880	7,434	0
86	5/14/2024	90.4	7,626	4,635	4,893	367,920	7,473	0
87	5/14/2024	96.9	8,049	4,487	5,212	367,740	7,516	0
88	5/14/2024	97	8,061	4,270	5,335	366,280	7,453	0
89	5/14/2024	97	7,816	3,724	5,561	367,700	7,606	0
90	5/15/2024	96.2	7,805	4,159	5,042	364,760	7,529	0
91	5/15/2024	84.8	7,262	4,338	4,797	368,840	7,413	0
92	5/15/2024	97.3	7,906	4,426	5,511	367,240	7,427	0
93	5/15/2024	97	7,675	4,171	5,381	368,080	7,491	0
94	5/15/2024	91	7,229	2,843	5,391	367,580	7,467	0
95	5/16/2024	97	7,570	3,852	5,221	366,500	7,453	0
96	5/16/2024	97.3	7,520	4,337	4,987	368,200	7,345	0
97	5/16/2024	98.9	7,306	4,426	5,396	372,520	7,498	0
98	5/16/2024	97.7	7,786	5,863	4,997	366,940	7,318	0
99	5/16/2024	91	7,276	4,486	5,317	368,460	7,657	0
100	5/17/2024	97	7,948	4,825	5,114	366,920	7,353	0
101	5/17/2024	90.8	7,414	4,158	4,816	367,540	7,238	0
102	5/17/2024	96	7,506	4,272	5,644	367,200	7,193	0
103	5/17/2024	98.2	7,629	4,652	4,308	369,040	7,257	0
104	5/17/2024	89.6	6,937	4,653	5,092	370,040	7,253	0
105	5/17/2024	97	7,503	4,335	5,344	366,020	7,384	0
106	5/17/2024	97	7,592	4,075	5,469	365,040	7,418	0

10/18/2024

BETTY SCHAFFER MSH 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
107	5/17/2024	97	7,641	4,288	5,384	364,460	7,217	0
108	5/18/2024	97	7,302	4,288	5,614	368,660	7,252	0
109	5/18/2024	97	6,819	3,852	5,244	364,740	7,219	0
110	5/18/2024	97.9	6,850	4,168	4,679	365,260	7,267	0
111	5/18/2024	98	6,896	3,879	4,647	362,120	7,073	0
112	5/18/2024	98.5	6,679	4,030	4,755	368,260	7,280	0
113	5/18/2024	97.8	6,618	3,824	4,129	311,140	6,416	0
114	5/18/2024	95	6,726	3,733	5,127	386,660	7,466	0
115	5/18/2024	88	6,273	3,849	5,147	384,940	7,397	0

RECEIVED
 Office of Oil and Gas

JUL 16 2024

WV Department of
 Environmental Protection

API 47051025050000 Farm name ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER Well number BETTY SCHAFFER MSH 401H

PRODUCING FORMATION(S)	DEPTHS	
<u>MARCELLUS</u>	<u>5,956'</u> TVD	<u>6,916'</u> MD
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Please insert additional pages applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2642 psi Bottom Hole psi DURATION OF TEST (hrs)

OPEN FLOW GAS mcpd OIL bpd NGL bpd WATER bpd GAS MEASURED BY Estimate 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 (FRESH WATER, BRINE, OIL, GAS, H2S, ETC)

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 (FRESH WATER, BRINE, OIL, GAS, H2S, ETC)
SEE ATTACHMENT 3					
					RECEIVED Office of Oil and Gas
					JUL 16 2024
					WV Department of Environmental Protection

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 IE WOODLANI State TX Zip 77380

Cementing Company SCHLUMBERGER
Address 110 SCHLUMBERGER DRIVE City SUGAR LANC State TX Zip 77478

Company SWN DRILLING COMPANY
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/CAP* Title Regulatory Specialist Date 7/12/2024

Submittal of Hydraulic Fracturing Chemical Disclosure Information

Attach copy of FRACFOCUS Registry

10/18/2024



RECEIVED
Office of Oil and Gas
JUL 16 2024
WV Department of
Environmental Protection

Well Name: BETTY SCHAFFER MSH 401H

47051025050000

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	280.00	280.00	
Top of Salt Water	802.00	802.00	NA	NA	
Pittsburgh Coal	355.00	355.00	364.00	364.00	
Pottsville (ss)	461.00	461.00	597.00	597.00	
Raven Cliff (ss)	809.00	808.00	912.00	910.00	
Big Injun (ss)	1510.00	1476.00	1645.00	1593.00	
Berea (siltstone)	1994.00	1894.00	2025.00	1921.00	
Rhinestreet (shale)	6073.00	5374.00	6412.00	5661.00	
Cashaqua (shale)	6412.00	5661.00	6499.00	5729.00	
Middlesex (shale)	6499.00	5729.00	6610.00	5808.00	
Burket (shale)	6610.00	5808.00	6645.00	5828.00	
Tully (ls)	6645.00	5828.00	6700.00	5861.00	
Mahantango (shale)	6700.00	5861.00	6916.00	5956.00	
Marcellus (shale)	6916.00	5956.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	04/26/2024
Job End Date:	05/18/2024
State:	West Virginia
County:	Marshall
API Number:	47-051-02505-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	BETTY SCHAFER MSH 401H
Latitude:	39.99087
Longitude:	-80.635582
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5994
Total Base Water Volume (gal)*:	39159358
Total Base Non Water Volume:	128530



Water Source	Percent
Surface Water, < 1000TDS	84.10%
Produced Water	15.90%

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					
Excelerate LX-15	SWN Well Services	Friction Reducer					
FE-1A	SWN Well Services	Iron Control					
HAI-501	SWN Well Services	Corrosion Inhibitor					
HCL	SWN Well Services	Solvent					RECEIVED Office of Oil and Gas
MC MX 2-2822	SWN Well Services	Scale Inhibitor					JUL 16 2024
Sand	SWN Well Services	Proppant					WV Department of Environmental Protection
Tolicide 4Frac	SWN Well Services	Biocide					
Items above are Trade Names. Items below are the individual ingredients.							
			Water	7732-18-5	100.00000	88.52081	
			Crystalline silica,	14808-60-7	100.00000	11.37374	

10/18/2024

			quartz				
			Complex Amine Compound	proprietary	50.00000	0.03960	
			Hydrochloric acid	7647-01-0	15.00000	0.03243	
			Hydrotreated light petroleum distillate	64742-47-8	25.00000	0.01980	
			Tetrakis (hydroxymethyl) phosphonium sulfate	55566-30-8	45.00000	0.00449	
			Surfactant	proprietary	5.00000	0.00396	
			Ethoxylated alcohols	proprietary	5.00000	0.00081	
			Alkoxylated polyhydric alcohol	proprietary	1.00000	0.00079	
			Quaternary Ammonium Compounds	68424-85-1	8.00000	0.00075	
			Methanol	67-56-1	60.00000	0.00072	
			Acetic anhydride	108-24-7	65.00000	0.00071	
			Acetic acid	64-19-7	35.00000	0.00038	
			Ethanol	64-17-5	3.00000	0.00025	
			Sodium chloride	7647-14-5	5.00000	0.00013	
			Modified thiourea polymer	proprietary	30.00000	0.00010	
			Propargyl alcohol	107-19-7	5.00000	0.00002	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
Office of Oil and Gas

JUL 16 2024

WV Department of
Environmental Protection

10/18/2024

**State of West Virginia
Department of Environmental Protection
Office of Oil and Gas**

Well Operator's Report of
Initial Gas-Oil Ratio

Well Operator SWN PRODUCTION COMPANY LLC Designated Agent _____
Address PO BOX 12359 Address _____
SPRING, TX 77391-2359 _____

Geological Target Formation: MARCELLUS Depth ^{5995' TVD / 7,152' MD} _____ feet
Perforation Interval 7,167' / 31,159' feet

Guidelines for testing:

1. A minimum of gas vented or flared.
2. A 24 hour pre-flow into pipelines or tanks.
3. Uniform producing rate during the 24 hour test per test period.
4. Measurement standards as for Form WR-39, "Report of Annual Production" (see 35CSR4-15)
5. Separate Form WR-36 for each producing formation in a multiple completion.

TEST DATA

Start of Test Date 7/5/2024	Time 9:00 AM	End of Test Date 07/06/2024	Time 9:00 AM	Duration of Test 24 Hours
Tubing Pressure 1,000 psi	Casing Pressure 1,940	Separator Pressure 350 psi	Separator Temperature 105	
Oil Production During Test 1,670	Gas Production During Test 11,480	Water Production During Test 1,350		
	BBLs	MCF	BBLs	105,000 PPM Chlorides -Salinity
Oil Gravity 60	Producing Method (flowing, pumping, gas lift etc.) Free Flowing Up Tubing			
API				

GAS PRODUCTION

Measurement Method Flange Tap <input checked="" type="checkbox"/> Pipe Tap <input type="checkbox"/> L-10 <input type="checkbox"/>		Positive Choke <input checked="" type="checkbox"/>
		Positive flow prover <input type="checkbox"/>
Orifice diameter 3"	Pipe Diameter (inside) 3"	Nominal Choke Size inches 128/64
Differential Pressure range 115-200 psi	Max. Static pressure range 491 psi	Prover and Orifice diameter - inches 3"
Differential 130 psi		Static 350 psi
Gas Gravity (Air = 1.0) Measured 0 Estimated 0.75	Flowing Temperature 105	Gas Temperature 105
24 Hour Coefficient 1	24 Hour coefficient pressure PSIA 14.65	

TEST RESULTS

Daily Oil 1,670	Daily Water 1,350	Daily Gas 11,480	Gas-Oil Ratio 6.9
---------------------------	-----------------------------	----------------------------	-----------------------------

RECEIVED
Office of Oil and Gas

JUL 16 2024

WV Department of
Environmental Protection

Carola Pruitt
Well Operator

BY CAROL A. PRUITT

ITS: DESIGNATED REPRESENTATIVE

10/18/2024

Latitude: 40°00'00"

SURFACE HOLE 2951'

BOTTOM HOLE 7,706'

JACKSON SURVEYING INC.

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

Latitude: 40°02'30"

Longitude: 80°37'30"

Longitude: 80°37'30"

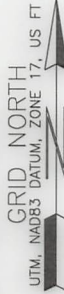
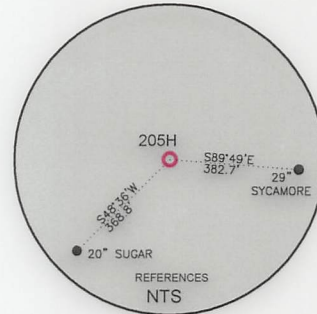
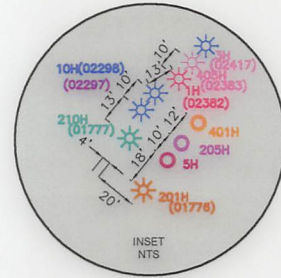
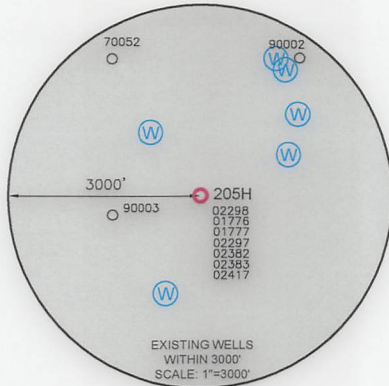


Table with 4 columns: LOCATION, UTM (NAD83, ZONE 17, METERS), NORTHING, EASTING. Rows include SURFACE HOLE LOCATION (SHL), LANDING POINT LOCATION (LPL), BOTTOM HOLE LOCATION (BHL), and another SURFACE HOLE LOCATION (SHL).

Table with 5 columns: LINE, BEARING, DISTANCE, DESCRIPTION, MONUMENT. Rows include L1, L2, L3, and L4.



WELL RESTRICTIONS

- 1. NO OCCUPIED DWELLINGS > 2500 SQ. FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ. FT. WITHIN 625 FEET OF CENTER OF PAD.
3. NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
4. NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
6. 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

- 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.
4. 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 Production Company, LLC

West Virginia State seal and WVDEP Office of Oil & Gas address: 601 57TH STREET CHARLESTON, WV 25034

WELL INFORMATION: (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. WVDEP OFFICE OF OIL & GAS. MINIMUM DEGREE OF ACCURACY: 1/200. PROVEN SOURCE OF SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)

BETTY SCHAFER MSH. OPERATOR'S WELL #: 205H. API WELL #: 47 STATE, 051 COUNTY, 02507 PERMIT

WELL TYPE: OIL [] WASTE DISPOSAL [] PRODUCTION [X] DEEP [] GAS [X] LIQUID INJECTION [] STORAGE [] SHALLOW [X]
WATERSHED: WHEELING CREEK (HUC-10) ELEVATION: 848.7'
DISTRICT: SAND HILL COUNTY: MARSHALL QUADRANGLE: MOUNDSVILLE, WV
SURFACE OWNER: ROY A. SCHAFER JR. & EDWARD J. SCHAFER ACREAGE: ±205.06
OIL & GAS ROYALTY OWNER: ROY A. SCHAFER JR. & EDWARD J. SCHAFER ACREAGE: ±205.06
DRILL [X] DRILL DEEPER [] REDRILL [] FRACTURE OR STIMULATE [X] PLUG OFF OLD FORMATION [] PERFORATE NEW FORMATION []
CONVERT [] PLUG & ABANDON [] CLEAN OUT & REPLUG [] OTHER CHANGE [] (SPECIFY)
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,012 TVD 21,965 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: 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: 05-08-2024. DRAWN BY: N. MANO. SCALE: 1" = 2000'. DRAWING NO: WELL LOCATION PLAT.

<input checked="" type="checkbox"/> EXISTING SWIMING <input checked="" type="checkbox"/> EXISTING WATER WELL <input checked="" type="checkbox"/> GUIDING POINT LOCATION <input checked="" type="checkbox"/> EXISTING \ PROPOSED WETLAND <input checked="" type="checkbox"/> PROPOSED SURFACE HOGE \ BOTTOM HOGE LEGEND:		PROPOSED BATH UNDRIGGED BATH GRAVE BOUNDARY DRIFTING UNIT SURVEYED BOUNDARY	WEIT LOCATION BGL DRAWING NO: SCALE: 1" = 5000' DRAWN BY: M. MAHO DATE: 02-08-2024
CITY: WASHINGTON STATE: WA ZIP CODE: 98208	CITY: WASHINGTON STATE: WA ZIP CODE: 98208	DESIGNATED AGENCY: BRITANNIA WOODY	
ADDRESS: 1300 FORT BIERBOHL BOYD, SUITE 300	ADDRESS: 1300 FORT BIERBOHL BOYD, SUITE 300	ESTIMATED DEPTH: 8'0.5' TO 12'0.0' TMD	
WELL OPERATOR: 2MI PRODUCTION COMPANY, LLC	WELL OPERATOR: 2MI PRODUCTION COMPANY, LLC	TAPSET FORMATION: MARGELTUS	
COMELET <input type="checkbox"/> BUNG & AVOIDION <input type="checkbox"/> STEAM OUT & BEYOND <input type="checkbox"/> OTHER CHANGE <input type="checkbox"/> (SPECIFY) DRIFT <input checked="" type="checkbox"/> DRIFT DEEBER <input type="checkbox"/> BEDRIFT <input type="checkbox"/> FRASURE OF STIMULATE <input checked="" type="checkbox"/> BUNG OFF OLD FORMATION <input type="checkbox"/> BEFORE/ATE NEW FORMATION <input type="checkbox"/>			
OIL & GAS BOYDIA OMMER: BOY A SCHAEFER JB & EDWARD J SCHAEFER		ACREAGE: 7302'00	
SURFACE OMMER: BOY A SCHAEFER JB & EDWARD J SCHAEFER		ACREAGE: 7302'00	
DISTRICT: 2ND HHT COUNTY: MARYHATT		ELEVATION: 848.3'	
WATERSHED: MHEEPING CREEK (HUC-10)		ELEVATION: 848.3'	
WELL TYPE: OIL <input type="checkbox"/> WATER DISCHARGE <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEB <input type="checkbox"/> GAS <input checked="" type="checkbox"/>		GROUND INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	

CHARGE/ION, WA 2024 801 21TH STREET OFFICE OF OIL & GAS MADEP UNITED STATES TOPOGRAPHIC MAPS (+) DENOTES LOCATION OF WELL ON	ELEVATION: (MAY 88' US FT) SOURCE OF GRADE BY SURVEY ACCURACY: 1/500 DECREE OF MINIMUM	STATE: WA COUNTY: MARYHATT PERMIT: 052024 WELL #: 47 OPERATOR, 2 WELL #: 202H BETTY SCHAEFER WSH
	PRODUCTION COMPANY, LLC PRODUCTION COMPANY, LLC 	

AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS THE UNDESIRABLE EFFECTS THAT THIS BATH IS

1. THIS BATH DOES NOT REPRESENT A BOUNDARY SURFACE OF THE TAX PARCELS MAPS BOUNDARY BY SPECIAL AND/OR FIELD LOCATIONS BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR SURVEYS AND BOYDIA OMMER INFORMATION AND THEIR NOTES ON SURVEY

2. NO MATERIALS PRODUCE FROM WITHIN 300 FEET OF 100 FEET OF THE PERIMETER OF DISTURBANCE

3. NO BEHAVIOR SURVEYS TAKEZ BOUNDZ OR RESERVOIRS WITHIN OF PROPOSED WELL

4. NO WATER METZ OR DELEGATED SWIMING ARE WITHIN 320 FEET CENTER OF BATH

5. NO UNDESIRABLE BEHAVIOR > 2000 TO FT. WITHIN 852 FEET OF CENTER OF BATH

6. NO OCCURRED BEHAVIOR > 2000 TO FT. WITHIN 852 FEET OF

WELL RESTRICTIONS

EASTING: 258'843.134	NORTHING: 4421.222.221	UTM (MAGN. ZONE 18, METERS):
BOTTOM HOGE LOCATION (BHG):		
EASTING: 231.222.200	NORTHING: 4428.881.811	UTM (MAGN. ZONE 18, METERS):
GUIDING POINT LOCATION (GPG):		
EASTING: 231.111.118	NORTHING: 4428.812.080	UTM (MAGN. ZONE 18, METERS):
SURFACE HOGE LOCATION (SHG):		
EASTING: 258'848.005	NORTHING: 4421.222.221	UTM (MAGN. ZONE 18, METERS):
BOTTOM HOGE LOCATION (BHG):		
EASTING: 231.222.840	NORTHING: 4421.000.222	UTM (MAGN. ZONE 18, METERS):
GUIDING POINT LOCATION (GPG):		
EASTING: 231.111.818	NORTHING: 4428.812.188	UTM (MAGN. ZONE 18, METERS):
SURFACE HOGE LOCATION (SHG):		

LINE	BEARING	DISTANCE	SURVEY POINT	DESCRIPTION	MONUMENT
G1	N 28.20.01, W	222.12,	222.21,	ASG TO BHG	
G2	N 81.55.05, E	121.2.18,	5548.20,	SHG TO GPG	
G3	S 28.05.42, E	108.1.81,		SHG TO GUIDEMARK	ED. 2\8, BEVAR
G4	N 14.11.52, W	855.88,		SHG TO GUIDEMARK	ED. 2\8, BEVAR

304-953-2821
 Clarkburg, WA 98205
 5413 EAST BIKE ST. # 115
 INC.
 JACKSON SURVEYING

Scale: 1" = 5000'

10/18/2024

Grid North

Bottom Hoge 2'884'

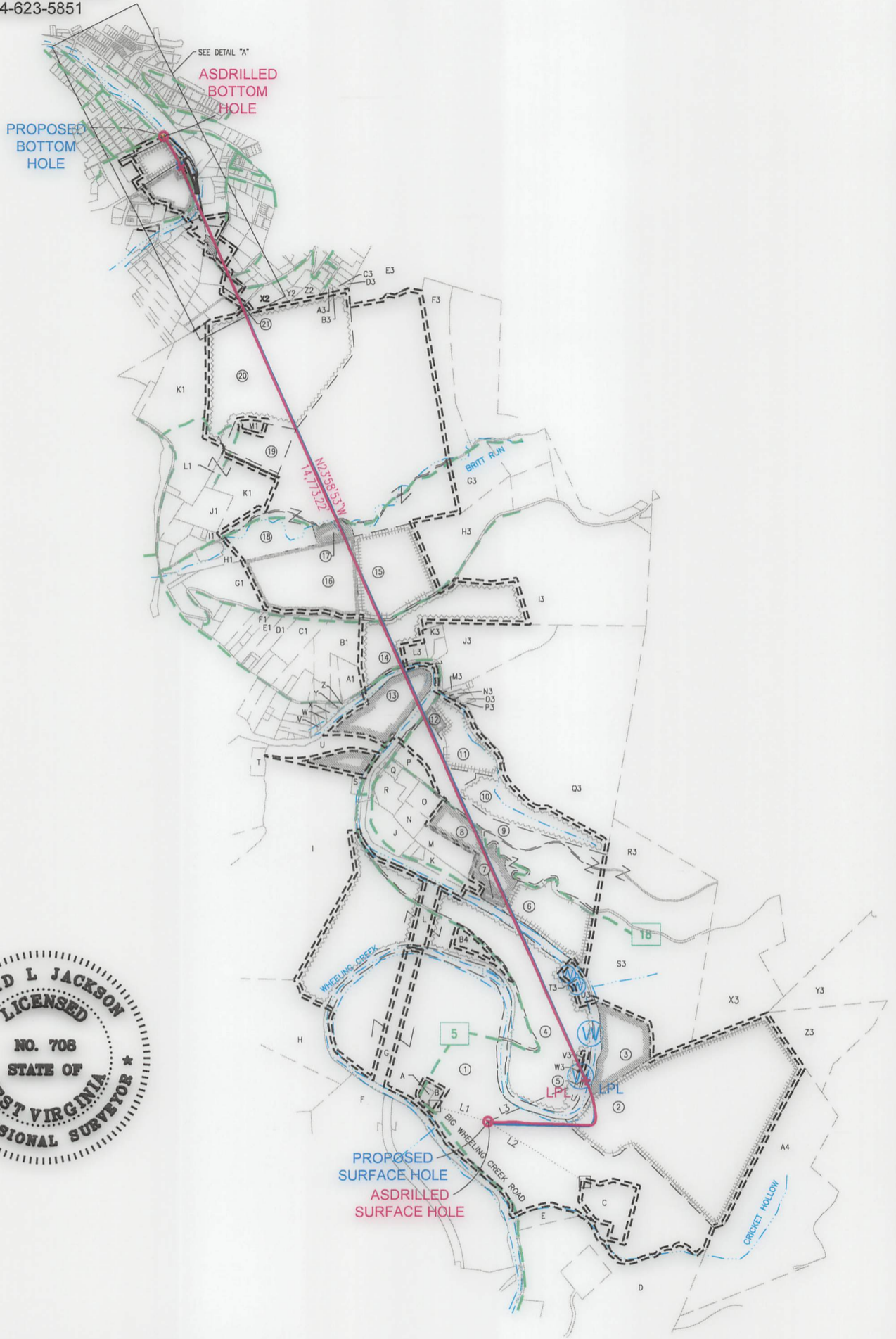
Surface Hoge 2'884'

Bottom Hoge 2'884'

Surface Hoge 2'884'

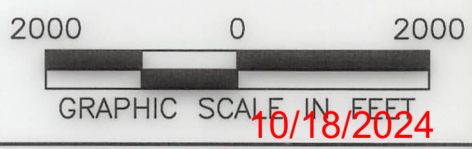
**JACKSON SURVEYING
INC.**

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



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.

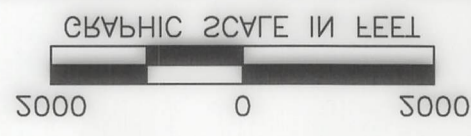
P.S. 708 *David L Jackson*



REVISIONS:	COMPANY:		
TABLE 05-06-2024			
	OPERATOR'S	BETTY SCHAFER MSH	API #
	WELL #:	205H	47-051-02507
	DISTRICT:	SAND HILL	COUNTY:
			MARSHALL
			STATE:
			WV
			DATE: 05-08-2024
			DRAWN BY: N. MANO
			SCALE: 1" = 2000'
			DRAWING NO:
			WELL LOCATION PLAT 2

LAND DISTRICT:	МАРШАЛЛ COUNTY:	MAP STATE:	МЕЕТ ГОСАЦИОН ПЛАТ 3
MEET #:	302H	41-021-0201	DRAWING NO:
ОПЕРАТОР,2	BETTY SCHAEFER M2H	РА #	SCALE: 1" = 5000'
Production Company, LLC		Production Company, LLC	
3MI		3MI	
COMPANY:		DATE: 02-08-2024	

REVISED:
 10-08-2024



AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION
 AT THE INFORMATION RECEIVED BY LUM AND REGULATIONS ISSUED
 CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS
 IN THE UNDERLINED, HEREBY CERTIFY THAT THIS PLAN IS

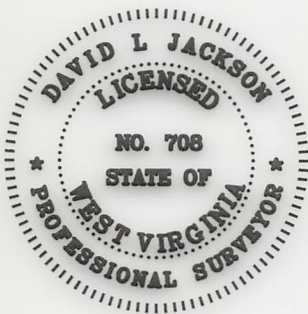
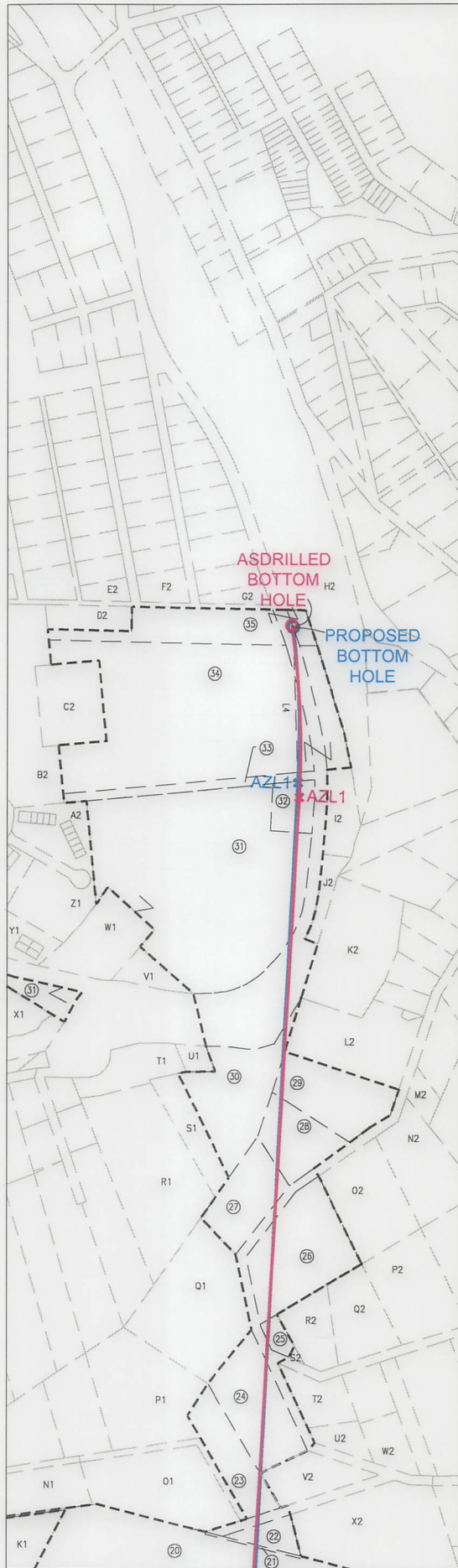


10/18/2024

JACKSON SURVEYING INC.
 115 EAST PIKE ST. # 115
 CLARKSPURG, MO 63025
 636-853-2821

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

DETAIL "A"



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*

10/18/2024



REVISIONS:	COMPANY:			
	OPERATOR'S			
	WELL #:		DATE: 05-08-2024	
	DISTRICT:		DRAWN BY: N. MANO	
	COUNTY:		SCALE: N/A	
	STATE:		DRAWING NO:	
	WELL LOCATION PLAT 3			

**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	SCHAFFER ROY A JR & EDWARD J (S/R)	12-9-22
TRACT	SURFACE OWNER (S)	TAX PARCEL
2	FISHER CHARLES B & CARLA S (S)	12-9-20
3	GRAY JOHN ALVIN (S)	12-9-21
4	GRAY JOHN ALVIN (S)	13-3-14
5	JESTERS COURT 13 INC	13-3-14.1
6	STEADMAN STELLA M - TOD (S)	12-9-5.1
7	SMITH BEVERLY JILL ANITA (S)	12-9-5.5
8	MANNERS DANIEL J ET UX (S)	12-9-5
9	DYE ALBERT M - LIFE (S)	12-9-6
10	WHEELING CREEK WATERSHED COMM (S)	12-9-6.1
11	HADSELL SANDRA L (S)	12-1-20
12	MERINAR JUSTIN K (S)	12-1-21
13	MAAS BRIAN J & AMY C - TRUST (S)	13-3-10
14	ADASE GEORGE & LAURIE (S)	12-1-29
15	KUNTZ JOHN H (S)	12-1-31
16	MERCER DARICK B & RENEE A (S)	12-1-32
17	CONSOLIDATION COAL COMPANY; MURRAY ENERGY C/O LAND DEPT (S)	12-1-10.2
18	COFFIELD MICHAEL L & TYLENE R (S)	12-1-10
19	HAMILTON MARY SCHENK & GARY P (S)	12-1-5.4
20	HAMILTON MARY SCHENK & GARY P (S)	12-1-5.1
21	ENGINEERED FOUNDATION SOLUTIONS, PLLS (S)	12-1A-94
22	FRANK WILLIAM EMMETT ET UX (S)	12-1A-19.1
23	ROMAGNOLI JUDY E (S)	12-1A-21
24	DORAN LOUIS WILLIAM ET UX (S)	12-1A-20
25	LUCAS DONNA J - TOD (S)	12-1A-8.1
26	WRIGHT WARREN W & CHERYL D (S)	12-1A-6
27	WOLF CHARLES E ET UX (S)	12-1A-3
28	WOLFE CHARLES E & JUDITH LEE WOLFE EST (S)	6-T17B-21
29	MARCELLUS DARCY L & C J (S)	6-T17B-20
30	FLATLEY R KEVIN (S)	16-1-38
31	BOARD OF EDUCATION (S)	10-W96-40.2
32	ROBRECHT RICHARD M & SUSAN L (S)	10-W96-43
33	CARDINAL HEALTH 110 LLC (S)	10-W96-39.5
34	CARDINAL HEALTH 110 LLC (S)	10-W96-39
35	CARDINAL HEALTH 110 LLC (S)	10-W96-39.4

10/18/2024

REVISIONS:	COMPANY:		 	
	OPERATOR'S	BETTY SCHAFFER MSH	API #	DATE: 05-08-2024
	WELL #:	205H	47-051-02507	DRAWN BY: N. MANO
	DISTRICT:	COUNTY:	STATE:	SCALE: N/A
	SAND HILL	MARSHALL	WV	DRAWING NO:
				WELL LOCATION PLAT 4

МЕГГ ГОСАЦИОН БГАТ 4	МАРШАЛТ	МВ	МЕГГ ГОСАЦИОН БГАТ 4
ДИСТРИКТ:	СОУИТА:	СТАТЕ:	ДРАУИНС ИО:
МЕГГ #:	202Н	41-021-05201	ЗСАГЕ: И\А
ОБЕРАТОР,2	ВЕТТА ЗШАФЕР М2Н	АР1 #	ДРАУИ В\А: И' МАНО
	Production Company, LLC	Production Company, LLC	DATE: 02-08-2024
	2MN	2MN	
РЕЛИЗИОН2:	СОМПАНИ:		

32	САВДИАГ HEALTH ТТО ГТС (2)	10-М0E-304
34	САВДИАГ HEALTH ТТО ГТС (2)	10-М0E-30
33	САВДИАГ HEALTH ТТО ГТС (2)	10-М0E-302
35	BOBECHT WICHARD M & ZUNAN Г (2)	10-М0E-43
37	BOARD OF EDUCATION (2)	10-М0E-403
30	ЕГАТГЕА В КЕЛИИ (2)	1E-1-38
20	МАВСЕГНО2 ДАВСА Г & С1 (2)	E-11AB-30
28	МОГЕЕ ШАВГЕ2 E & JUDITH ГЕЕ МОГЕЕ Е21 (2)	E-11AB-37
21	МОГЕЕ ШАВГЕ2 E Е1 ОХ (2)	15-1A-3
29	WRIGHT MARVEN M & CHEVAL D (2)	15-1A-e
22	ГУСА2 ДОИИА 1 - 10D (2)	15-1A-87
24	DOVAN ГОНО2 МИГПАМ Е1 ОХ (2)	15-1A-30
23	КОМАЕИОП1 ЮДА E (2)	15-1A-37
25	ЕВАИК МИГПАМ EMMETT Е1 ОХ (2)	15-1A-107
27	ENGINEERED FOUNDATION ZORGUNOIS' БГТ2 (2)	15-1A-04
20	НАМИГЛОИ МАВУ ЗШЕИК & САВУ Б (2)	15-1-27
10	НАМИГЛОИ МАВУ ЗШЕИК & САВУ Б (2)	15-1-24
18	СОЕПЕГД WICHAEГ Г & ТУГЕИЕ В (2)	15-1-10
	С\О ГАИД ДЕБТ (2)	15-1-103
11	COINTEGRATION COAL СОМПАНИ, МУВВАУ ЕИЕВСА	
19	МЕВСЕВ ДАВICK В & ВЕИЕЕ А (2)	15-1-35
12	КУИТ2 ТОНИ Н (2)	15-1-37
14	АДА2E GEORGE & ГАУВIE (2)	15-1-50
13	МАА2 ВРИАН 1 & АМУ С - ТРУ2Т (2)	13-3-10
15	МЕВИАВ1У2ТИИ К (2)	15-1-37
17	НАД2ЕГГ ЗАИДРА Г (2)	15-1-30
10	WHEEPIE SWEEK MATERSHED COMM (2)	15-0-07
0	ДЛЕ АГВЕРТ M - ПEE (2)	15-0-e
8	МАИИЕ22 ДАИИЕГ1 Е1 ОХ (2)	15-0-2
1	2MITH ВЕЛЕРГ1 ИГГ АИИ1А (2)	15-0-22
e	2TEADMANI 2TEГГА M - 10D (2)	15-0-27
2	1E2TE22 COUPT 13 ИIC	13-3-147
4	ЕВАУ ТОНИ АГЛИИ (2)	13-3-14
3	ЕВАУ ТОНИ АГЛИИ (2)	15-0-37
5	ЕI2HEB ШАВГЕ2 В & САВГА 2 (2)	15-0-30
ТРАСТ	ЗУВРАСЕ ОМИЕВ (2)	ТАХ РАВСЕГ
Т	ЗШАФЕР БОУ А 1B & EDWARD 1 (2\B)	15-0-35
ТРАСТ	ЗУВРАСЕ ОМИЕВ (2) \ БОЛАГТУ ОМИЕВ (B)	ТАХ РАВСЕГ
	МЕГГ БОВЕ ТРАСТ2	

10/18/2024

304-053-2821
 Jackson, MS 39205
 5413 EAST BIKE ST # 115
 INC.
 JACKSON SUBLEASING



**JACKSON SURVEYING
INC.**

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

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	SCHAFFER ROY A JR & SCHAFFER EDWARD J	12-9-23
B	SCHAFFER ROY A JR & SCHAFFER EDWARD J	12-9-22.1
C	OHIO COUNTY COAL RESOURCES INC	12-9-22.2
D	FISH PATRICIA A & FREDERICK W	12-10-1.2
E	ROMAN EUGENE H	12-10-1
F	HOGG THOMAS G & DONN W ET AL	13-8-3
G	SCHAFFER ROY A JR & EDWARD J	12-9-24
H	HART JOHN J & RENEE A	13-8-2.1
I	HART JOHN J & RENEE A	13-3-11
J	LANGMYER SCOTT R & MELANEY F	12-9-3
K	LANGMYER RAYMOND J	12-9-4
L	GRAY JOHN ALVIN	13-3-13
M	LANGMYER RAYMOND J	12-9-3.1
N	MANNERS-THIELE NADENE R & CHARLES L THIELE	12-9-5.4
O	TEACOACH JAY M ET UX	12-9-5.3
P	DYE WILLIAM R	12-9-1
Q	THIELE CHARLES L & NADENE R MANNERS-THIELE	12-9-2.3
R	STRONG GREGORY S & LOUISE M	12-9-2
S	MAAS BRIAN J & AMY C - TRUST	13-3-9
T	MAAS BRIAN J & AMY C - TRUST	13-3-10
U	MAAS BRIAN J & AMY C - TRUST	13-3-8
V	MALARSKI PETE E ET UX	12-1B-35
W	MALARSKI PETE E ET UX	12-1B-36
X	STEGMAN CATHERINE A - TOD	12-1B-37
Y	STEGMAN CATHERINE A - TOD	12-1B-37.1
Z	STEGMAN CATHERINE A - TOD	12-1B-38
A1	WHARTON PETER R ET AL	12-1-34
B1	ESTEP DOUGLAS J & LINDA R - TOD	12-1-33.1
C1	SLIGAR JOHN WALTER	12-1-39
D1	ROMAN EUGENE H	12-1-40.1
E1	EARNEST ALLEN DOUGLAS	12-1-40
F1	HENRY LORI MYLES	12-1-41
G1	MARPLE JEFFREY J & BARBARA J	12-1-32.1
H1	HIGGINS CONSTANCE L - LIFE	12-1-7.3
I1	RUNKLE SHERRY L	12-1-7.2
J1	SLIGAR KAREN SCHENK & TERRY B	12-1-5.2
K1	SLUGAR KAREN SCHENK	12-1-5
L1	REARDON SHELLY S	12-1-5.6
M1	WETMORE BROOKE L & BRIAN B	12-1-5.5
N1	ROMAGNOLI JUDY E	12-1A-23
O1	ROMAGNOLI JUDY E	12-1A-22
P1	ROMAGNOLI JUDY E	12-1A-27
Q1	LUCAS DAVID S JR	12-1A-4
R1	YOST HAROLD JACK & INA K	16-1-35
S1	FLATLEY R KEVIN	16-1-36
T1	ATLAS REAL ESTATE LLC	16-1-35.2
U1	FLATLEY R KEVIN	16-1-37
V1	WHEELING POWER CO WHEELING ELECTRIC CO	10-W99-2
W1	WHEELING POWER COMPANY WHEELING ELECTRIC CO	10-W99-1
X1	TJG PROPERTIES LLC	13-2-16
Y1	TJG PROPERTIES LLC	10-W99-4
Z1	TJG PROPERTIES LLC	10-W99-3
A2	STEVICK DENISE A	10-W99-7
B2	CARDINAL HEALTH 110 LLC	10-W96-39.1


ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
C2	CARDINAL HEALTH 110 LLC	10-W96-39.6
D2	DANAHEY MARY MARGARET (LE) DANAHEY U L; LEECH D	10-W96-39.3
E2	HETZEL LYNN E	10-W96-36
F2	VOSVICK MILAN	10-W96-37
G2	ARMBRUSTER JOHN D	10-W96-38.1
H2	OHIO COUNTY PUBLIC SERV DIST	06-T17B-1.1
I2	SILO INC C/O ROBINSON RICHARD	06-T17B-324
J2	LANGMYER LEXIE	06-T17B-7
K2	MAXWELL SHIRLEY L	06-T17B-17
L2	MAXWELL SHIRLEY L & C L JR	06-T17B-18
M2	KOVAL MATTHEW F KOVAL SUSAN R	06-T17B-48.2
N2	BATES ROBERT A & KAREN A	06-T17B-69.1
O2	BATES ROBERT A & KAREN A	06-T17B-69
P2	HOLPP SHIRLEY J	12-1A-7
Q2	WATSON JAMES W & MARGARET L IRREVOCABLE TRUST	12-1A-8.2
R2	CLOUGH GARY T & CHRISTINE M	12-1A-8
S2	CLOUGH GARY T & CHRISTINE M	12-1A-8.3
T2	WESTFALL LAIRL W ET UX	12-1A-9
U2	HISSAM BETTY ROSE	12-1A-9.1
V2	THOMPSON MARIAN ANITA - TOD (S)	12-1A-20.1
W2	KOCH JULIE	12-1A-10.1
X2	WARNICK RONALD & ESTHER	12-1A-19
Y2	BLUST HAROLD F	12-1A-18.2
Z2	BLUST HAROLD F	12-1A-87
A3	SNYDER JOHN J ET UX	12-1A-85
B3	SNYDER JOHN J ET UX	12-1A-84
C3	ZDONCZYK ROBIN G	12-1A-83.1
D3	SNYDER LONNIE A	12-1A-83
E3	HARTMAN WALTER L ET UX	12-1-10.1
F3	COFFIELD MICHAEL & TYLENE	12-1-47
G3	BARTOLOVICH STEPHEN M	12-1-11
H3	LEASURE ANNA	12-1-30
I3	SHELLHASE MARK A ET UX	12-1-18
J3	ADASE GEORGE & LAURIE	12-1-28
K3	GRAY JOHN A ET UX	12-1-28.2
L3	SAVAGE CHARLES JACKSON	12-1-29.1
M3	PALMER ADAM R	12-1-26
N3	FRAZIER GREGORY SCOTT - TOD	12-1-24
O3	DUFF JAMES E & BROOKE L CAPP	12-1-22
P3	DUFF JAMES E & BROOKE L CAPP	12-1-22.1
Q3	FOLMAR EDITH A TRUST	12-1-19
R3	ISALY ROBERT A SR EST	12-9-9
S3	PIKEWOOD ENERGY CORP	12-9-10
T3	PROVANCE FRANK J & ELIZABETH & BARRY F	13-3-14.5
U3	SHEPHERD TIMOTHY & DEBORAH L	13-3-14.4
V3	JESTERS COURT 13 INC	13-3-14.3
W3	JESTERS COURT 13 INC	13-3-14.2
X3	GRAY JOHN ALVIN	12-9-11
Y3	MERINAR JAMES MARTIN ET UX	12-9-15.1
Z3	MERINAR CALVIN C - LIFE	12-9-15
A4	MERINAR CALVIN C - LIFE	12-9-19
B4	GRAY JARED	13-3-14.7

10/18/2024

REVISIONS:	COMPANY:	 	
	OPERATOR'S	BETTY SCHAFFER MSH	API #
	WELL #:	205H	47-051-02507
	DISTRICT:	SAND HILL	COUNTY:
		STATE:	WV
		DATE:	05-08-2024
		DRAWN BY:	N. MANO
		SCALE:	N/A
		DRAWING NO:	
		WELL LOCATION PLAT	5

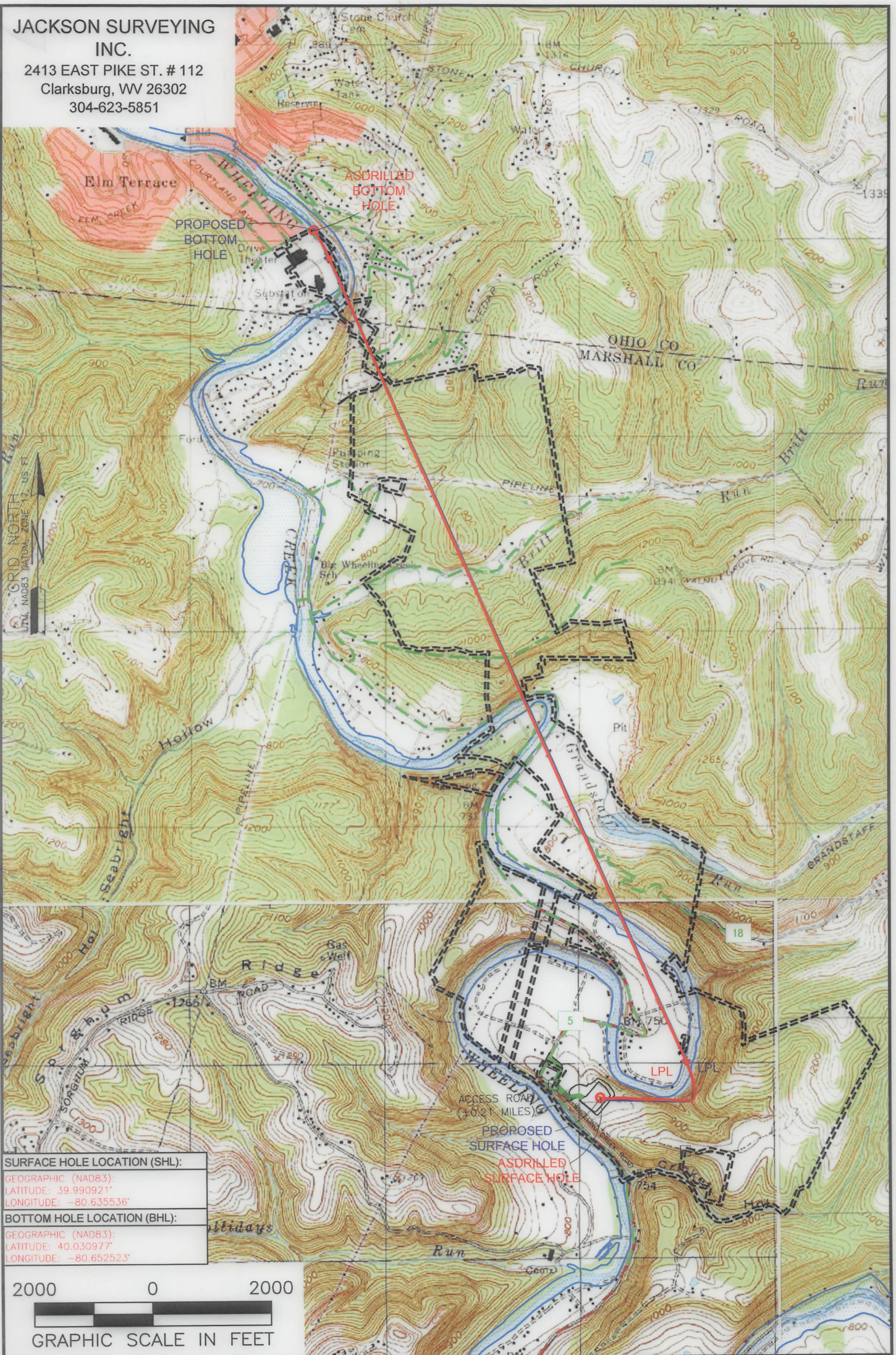
ADJOINING OWNERS TABLE			ADJOINING OWNERS TABLE		
TAX PARCEL	SURFACE OWNER	TRACT	TAX PARCEL	SURFACE OWNER	TRACT
10-W96-39.6	CARDINAL HEALTH 110 LLC	C2	12-9-23	SCHAFFER ROY A JR & SCHAFFER EDWARD J	A
10-W96-39.3	DANAHEY MARY MARGARET (LE) DANAHEY U; LEECH D	D2	12-9-22.1	SCHAFFER ROY A JR & SCHAFFER EDWARD J	B
10-W96-36	HETZEL LYNN E	E2	12-9-22.2	OHIO COUNTY COAL RESOURCES INC	C
10-W96-32	VOZVICK MILAN	F2	12-10-1.2	FISH PATRICIA A & FREDERICK W	D
10-W96-38.1	ARMBRUSTER JOHN D	G2	12-10-1	ROMAN EUGENE H	E
08-17B-1.1	OHIO COUNTY PUBLIC SERV DIST	H2	13-8-3	HOGG THOMAS G & DONN W ET AL	F
08-17B-324	SILCO INC C/O ROBINSON RICHARD	I2	12-9-24	SCHAFFER ROY A JR & EDWARD J	G
08-17B-7	LANGMYER LEXIE	J2	13-8-2.1	HART JOHN I & RENEE A	H
08-17B-17	MAXWELL SHIRLEY J	K2	13-3-11	HART JOHN I & RENEE A	I
08-17B-18	MAXWELL SHIRLEY J & C L JR	L2	12-9-3	LANGMYER SCOTT R & MELANIE F	J
08-17B-48.2	KOVAL MATTHEW F KOVAL SUSAN R	M2	12-9-4	LANGMYER RAYMOND J	K
08-17B-69.1	BATES ROBERT A & KAREN A	N2	13-3-13	GRAY JOHN A VIN	L
08-17B-69	BATES ROBERT A & KAREN A	O2	12-9-3.1	LANGMYER RAYMOND J	M
12-1A-7	HOLPP SHIRLEY J	P2	12-9-24	MANNERS-THIELE NADENE R & CHARLES J THIELE	N
12-1A-8.2	WATSON JAMES W & MARGARET L IRREVOCABLE TRUST	Q2	12-9-23	TEACOCK HAY M ET UX	O
12-1A-8	CLOUGH GARY T & CHRISTINE M	R2	12-9-1	DYE WILLIAM R	P
12-1A-8.3	CLOUGH GARY T & CHRISTINE M	S2	12-9-2.3	THIELE CHARLES J & NADENE R MANNERS-THIELE	Q
12-1A-9	WESTFALL LAIRL W ET UX	T2	12-9-2	STRONG GREGORY S & LOUISE M	R
12-1A-9.1	HISSAM BETTY ROSE	U2	13-3-9	MAAS BRIAN I & AMY C - TRUST	S
12-1A-20.1	THOMPSON MARIAN ANITA - TOD (2)	V2	13-3-10	MAAS BRIAN I & AMY C - TRUST	T
12-1A-10.1	KOCH JULIE	W2	13-3-8	MAAS BRIAN I & AMY C - TRUST	U
12-1A-19	WARWICK RONALD & ESTHER	X2	12-1B-25	MAJASKI PETE E ET UX	V
12-1A-18.2	BLUST HAROLD F	Y2	12-1B-36	MAJASKI PETE E ET UX	W
12-1A-87	BLUST HAROLD F	Z2	12-1B-37.1	STEGMAN CATHERINE A - TOD	X
12-1A-85	SNYDER JOHN I ET UX	A3	12-1B-38	STEGMAN CATHERINE A - TOD	Y
12-1A-84	SNYDER JOHN I ET UX	B3	12-1-34	STEGMAN CATHERINE A - TOD	Z
12-1A-83.1	ZONCZYK ROBIN G	C3	12-1-33.1	WHARTON PETER R ET AL	A1
12-1A-83	SNYDER LONNIE A	D3	12-1-33.1	ESTEP DOUGLAS J & LINDA R - TOD	B1
12-1-10.1	HARTMAN WALTER L ET UX	E3	12-1-39	SLIGAR JOHN WALTER	C1
12-1-11	COFFIELD MICHAEL & TYLENE	F3	12-1-40.1	ROMAN EUGENE H	D1
12-1-30	LEASURE ANNA	G3	12-1-40	EARNEST ALLEN DOUGLAS	E1
12-1-18	SCHLHASE MARK ET UX	H3	12-1-41	HENRY LORI MYLES	F1
12-1-28	ADASE GEORGE & LARIE	I3	12-1-32.1	MARPLE JEFFREY J & BARBARA J	G1
12-1-28.2	GRAY JOHN A ET UX	J3	12-1-7.3	HIGINS CONSTANCE L - LIFE	H1
12-1-29.1	SAVAGE CHARLES JACKSON	K3	12-1-7.2	RUNKLE SHERY J	I1
12-1-26	PALMER ADAM R	L3	12-1-2.2	SLIGAR KAREN SCHEIK & TERRY B	J1
12-1-24	FRAZIER GREGORY SCOTT - TOD	M3	12-1-2	SLIGAR KAREN SCHEIK	K1
12-1-22	DUFF JAMES E & BROOKE L CAPP	N3	12-1-2.6	REARDON SHELLY S	L1
12-1-22.1	DUFF JAMES E & BROOKE L CAPP	O3	12-1-2.2	WETMORE BROOKE J & BRIAN B	M1
12-1-19	FOLMAR EDITH A TRUST	P3	12-1A-23	ROMANO LUDY E	N1
12-9-9	ISALY ROBERT A SR EST	Q3	12-1A-22	ROMANO LUDY E	O1
12-9-10	PIKEWOOD ENERGY CORP	R3	12-1A-21	ROMANO LUDY E	P1
12-3-14.2	PROVANACE FRANK I & ELIZABETH & BARRY F	T3	12-1A-4	LUCAS DAVID S JR	Q1
12-3-14.4	SHEPHERD TIMOTHY & DEBORAH J	U3	16-1-32	YOST HAROLD JACK & INVA K	R1
12-3-14.3	LESTERS COURT 13 INC	V3	16-1-36	FLATLEY R KEVIN	S1
12-3-14.2	LESTERS COURT 13 INC	W3	16-1-32.2	ATLAS REAL ESTATE LLC	T1
12-9-11	GRAY JOHN A VIN	X3	16-1-37	FLATLEY R KEVIN	U1
12-9-12.1	MERINAR JAMES MARTIN ET UX	Y3	10-W99-2	WHEELING POWER CO WHEELING ELECTRIC CO	V1
12-9-12	MERINAR CALVIN C - LIFE	Z3	10-W99-1	WHEELING POWER COMPANY WHEELING ELECTRIC CO	W1
12-9-19	MERINAR CALVIN C - LIFE	A4	13-2-16	TIG PROPERTIES LLC	X1
12-3-14.7	GRAY JARED	B4	10-W99-4	TIG PROPERTIES LLC	Y1
			10-W99-3	TIG PROPERTIES LLC	Z1
			10-W99-7	STEVICK DENISE A	A2
			10-W96-39.1	CARDINAL HEALTH 110 LLC	B2

10/18/2024

		COMPANY:	REVISIONS:
DATE: 05-08-2024	API # 47-051-02507	OPERATOR'S BETTY SCHAFFER MSH	WELL #: 205H
DRAWN BY: N. MANO	SCALE: N/A	COUNTY: MARSHALL	DISTRICT: SAND HILL
DRAWING NO:	STATE: WV	WELL LOCATION:	

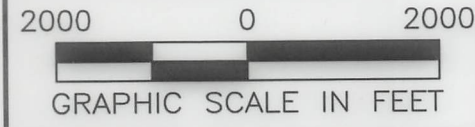
**JACKSON SURVEYING
INC.**

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



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.990921°
LONGITUDE: -80.635536°

BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.030977°
LONGITUDE: -80.652523°



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

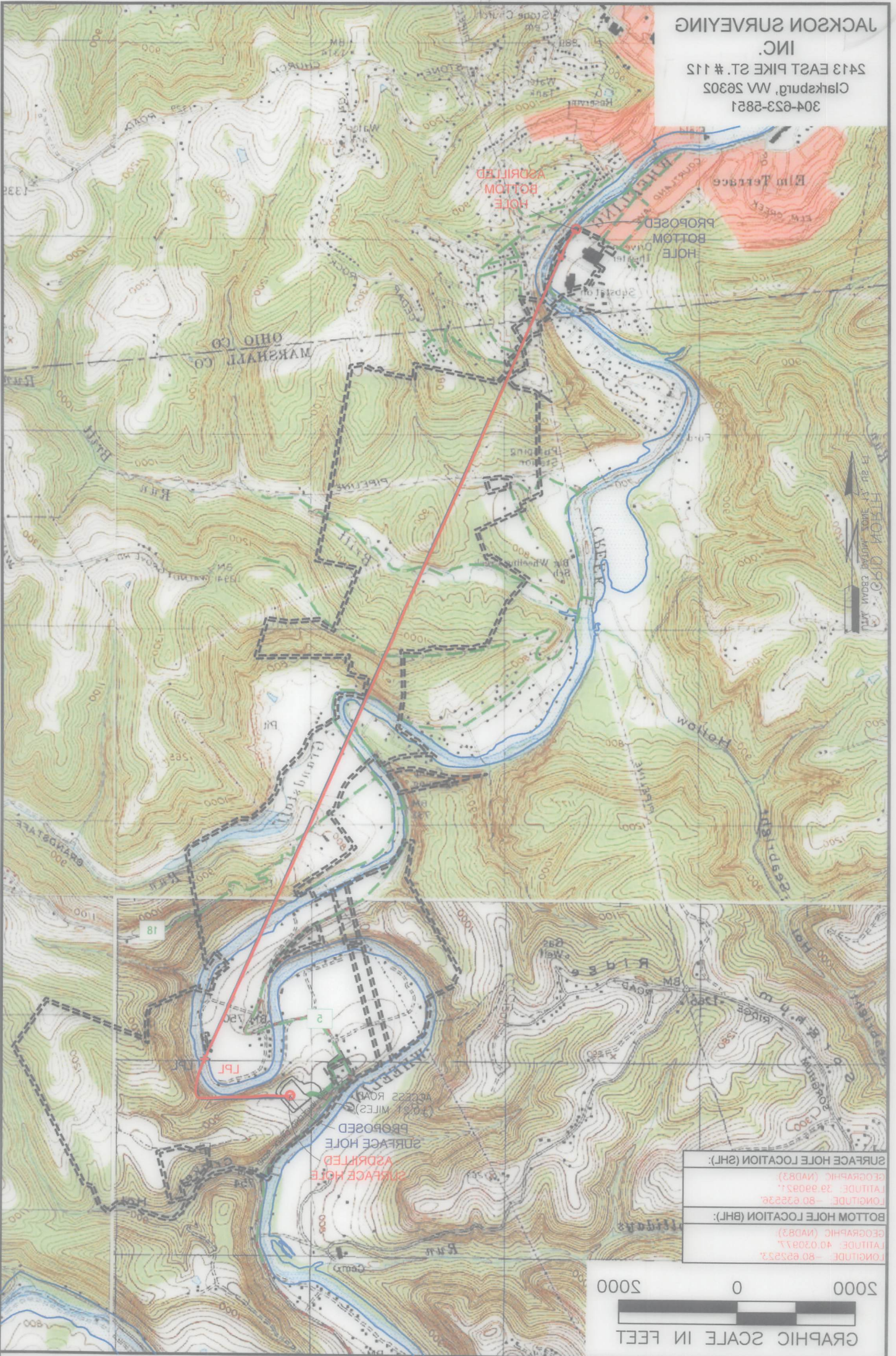
LEGEND:

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

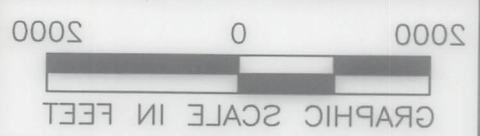
10/18/2024

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: BETTY SCHAFFER MSH	WELL # 205H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT; SAND HILL	
SURFACE OWNER: ROY A. SCHAFFER JR. & EDWARD J. SCHAFFER	USGS 7 1/2 QUADRANGLE MAP NAME MOUNDSVILLE, WV	API # 47-051-02507	

JACKSON SURVEYING
 INC.
 2413 EAST PIKE ST. # 112
 Clarksburg, WV 26302
 304-623-2851



SURFACE HOLE LOCATION (SHL):	
GEORGIC (NAD83)	
LATITUDE: 39.999217	
LONGITUDE: -80.632326	
BOTTOM HOLE LOCATION (BHL):	
GEORGIC (NAD83)	
LATITUDE: 40.020817	
LONGITUDE: -80.632326	



LEGEND:

ADRIALD PATH	FLOOD PLAIN
PROPOSED PATH	LPL*
LEASE BOUNDARY	EXISTING \ PRODUCING WELLD
ACCESS ROAD TO PREV. SITE	PROPOSED SURFACE HOLE \ BOTTOM HOLE
PUBLIC ROAD	ACCESS ROAD

WELL OPERATOR: SWI PRODUCTION COMPANY, LLC	WELL (FARM) NAME: BETTY SCHAFER MSH	WELL # 205H	SERIAL #
ADDRESS: 1300 FOR PIERPONT ROAD, SUITE 200 MORGANTOWN, WV 26508	COUNTY - CODE MARSHALL - 051	DISTRICT: SAND HILL	
SURFACE OWNER: ROY A. SCHAFER JR. & EDWARD J. SCHAFER	WV MOUNDVILLE, WV	API # 47-021-02507	

10/18/2024