

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

API 47 - 051 - 02425 County MARSHALL District LIBERTY  
Quad 278-CAMERON Pad Name CHARLES JAMISON MSH PAD Field/Pool Name NORTH VICTORY WET  
Farm name SWN PRODUCTION COMPANY, LLC Well Number CHARLES JAMISON MSH 410H  
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 4,404,730.226 Easting 533,605.387  
Landing Point of Curve Northing 4,405,493.258 Easting 533,930.984  
Bottom Hole Northing 4,400,681.288 Easting 537,114.593

Elevation (ft) 1,337.3' 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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Date permit issued 1/21/2022 Date drilling commenced 3/11/2022 Date drilling ceased 4/12/2022  
Date completion activities began 7/30/2022 Date completion activities ceased 9/25/2022  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 322' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1'121' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1,119' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

**APPROVED**

Reviewed by:  
Sh  
01/04/23

API 47- 051 - 02425 Farm name SWN PRODUCTION COMPANY, LLC Well number CHARLES JAMISON MSH 410H

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; 34 BBLS
Surface	17.5	13.375	407	NEW	J-55/54.5#		Y; .5 BBLS
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25	9.625	2,828'	NEW	J-55/36#		Y; 65 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	27,375	NEW	P-110 HP/20#		Y; 9 BBLS
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	415	15.6	1.19	493.8	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	367/773	15.6/16.0	1.18/1.12	43.06/865.76	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4821	15.0	1.29	6219.09	2,400'	24
Tubing							

Drillers TD (ft) 27,375' Loggers TD (ft) 27,375'  
 Deepest formation penetrated MARCELLUS Plug back to (ft) 27,282'  
 Plug back procedure N/A

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Kick off depth (ft) 6,247' TVD

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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: 6 CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: 38 CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: 440 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	
<u>MARCELLUS</u>	<u>7,116'</u> TVD	<u>8,267'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2,990 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 27,564 mcfpd Oil 17 bpd NGL \_\_\_\_\_ bpd Water 1,229 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

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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 Denix Grantham Title REGULATORY SPECIALIST Date 12.14.2022

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/30/2022
Job End Date:	9/24/2022
State:	West Virginia
County:	Marshall
API Number:	47-051-02425-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	CHARLES JAMISON MSH 410
Latitude:	39.79186385
Longitude:	-80.60749816
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,187
Total Base Water Volume (gal):	33,270,622
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	90.52769	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	85.00000	0.26393	

			Water	7732-18-5	45.00000	0.26393	
			Water	7732-18-5	100.00000	0.26393	
FSTI-CI-02	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Plexslick 930	SWN Well Services	Friction Reducer					
				Listed Below			
Sand	SWN Well Services	Proppant					
				Listed Below			
Ferriplex 80	SWN Well Services	Iron Control					
				Listed Below			
HCL	SWN Well Services	Solvent					
				Listed Below			
Plexaid 655NM	SWN Well Services	Scale Inhibitor					
				Listed Below			
Tolicide 4Frac	SWN Well Services	Biocide					
				Listed Below			

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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	9.12729	
			Hydrochloric Acid	7647-01-0	15.00000	0.03684	

			Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	45.00000	0.00515	
			Sodium Erythorbate	6381-77-7	100.00000	0.00131	
			Quaternary ammonium compounds	68424-85-1	7.50000	0.00086	
			Ethanol	64-17-5	2.50000	0.00029	
			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	
			benzyl chloridequaternized	72480-70-7	5.00000	0.00002	
			1-Decanol	112-30-1	5.00000	0.00002	
			Isopropyl alcohol	67-63-0	5.00000	0.00002	
			1-Octanol	111-87-5	5.00000	0.00002	
			Triethyl phosphate	78-40-0	5.00000	0.00002	
			2-Butoxyethanol	111-76-2	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)

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Well Name:

Charles Jamison MSH 410H

47051024250000

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	322.00	322.00	
Top of Salt Water	1195.00	1195.00	NA	NA	
Pittsburgh Coal	1087.00	1087.00	1096.00	1096.00	
Pottsville (ss)	1195.00	1195.00	1213.00	1213.00	
Raven Cliff (ss)	1640.00	1635.00	1783.00	1774.00	
Maxton (ss)	2058.00	2038.00	2278.00	2246.00	
Big Injun (ss)	2278.00	2246.00	2540.00	2484.00	
Berea (siltstone)	2923.00	2834.00	7106.00	6426.00	
Rhinestreet (shale)	7106.00	6426.00	7523.00	6753.00	
Middlesex (shale)	7706.00	6871.00	7868.00	6966.00	
Burket (shale)	7868.00	6966.00	7914.00	6990.00	
Tully (ls)	7914.00	6990.00	7966.00	7015.00	
Mahantango (shale)	7966.00	7015.00	8267.00	7116.00	
Marcellus (shale)	8267.00	7116.00	NA	NA	GAS

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**CHARLES JAMISON MSH 410H**  
**ATTACHMENT 1**  
**PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	7/30/2022	27,282	27,186	36
2	8/1/2022	27,152	26,973	36
3	8/5/2022	26,940	26,762	36
4	8/10/2022	26,728	26,550	36
5	8/12/2022	26,517	26,338	36
6	8/13/2022	26,315	26,303	36
7	8/16/2022	26,093	25,914	36
8	8/31/2022	25,881	25,703	36
9	9/1/2022	25,669	25,491	36
10	9/1/2022	25,457	25,279	36
11	9/2/2022	25,246	25,067	36
12	9/2/2022	25,034	24,855	36
13	9/3/2022	24,822	24,643	36
14	9/3/2022	24,610	24,432	36
15	9/3/2022	24,398	24,220	36
16	9/4/2022	24,187	24,008	36
17	9/4/2022	23,975	23,796	36
18	9/4/2022	23,763	23,584	36
19	9/5/2022	23,551	23,373	36
20	9/5/2022	23,339	23,161	36
21	9/5/2022	23,127	22,949	36
22	9/5/2022	22,916	22,737	36
23	9/6/2022	22,704	22,525	36
24	9/6/2022	22,492	22,313	36
25	9/6/2022	22,280	22,102	36
26	9/7/2022	22,068	21,890	36
27	9/7/2022	21,856	21,678	36
28	9/7/2022	21,645	21,466	36
29	9/7/2022	21,433	21,254	36
30	9/7/2022	21,221	21,043	36
31	9/8/2022	21,009	20,831	36
32	9/8/2022	20,797	20,619	36
33	9/8/2022	20,586	20,407	36
34	9/8/2022	20,374	20,195	36
35	9/9/2022	20,162	19,983	36
36	9/9/2022	19,950	19,772	36
37	9/10/2022	19,738	19,560	36
38	9/10/2022	19,526	19,348	36
39	9/10/2022	19,315	19,136	36
40	9/10/2022	19,103	18,924	36
41	9/10/2022	18,891	18,712	36
42	9/11/2022	18,679	18,501	36
43	9/11/2022	18,467	18,289	36

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**CHARLES JAMISON MSH 410H  
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STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	9/11/2022	18,256	18,077	36
45	9/11/2022	18,044	17,865	36
46	9/12/2022	17,832	17,653	36
47	9/12/2022	17,620	17,442	36
48	9/12/2022	17,408	17,230	36
49	9/12/2022	17,196	17,018	36
50	9/13/2022	16,985	16,806	36
51	9/13/2022	16,773	16,594	36
52	9/13/2022	16,561	16,382	36
53	9/13/2022	16,349	16,171	36
54	9/14/2022	16,137	15,959	36
55	9/14/2022	15,926	15,747	36
56	9/14/2022	15,714	15,535	36
57	9/14/2022	15,502	15,323	36
58	9/15/2022	15,290	15,112	36
59	9/15/2022	15,078	14,900	36
60	9/15/2022	14,866	14,688	36
61	9/15/2022	14,655	14,476	36
62	9/16/2022	14,443	14,264	36
63	9/16/2022	14,231	14,052	36
64	9/16/2022	14,019	13,841	36
65	9/17/2022	13,807	13,629	36
66	9/17/2022	13,596	13,417	36
67	9/17/2022	13,384	13,205	36
68	9/18/2022	13,172	12,993	36
69	9/18/2022	12,960	12,782	36
70	9/18/2022	12,748	12,570	36
71	9/19/2022	12,536	12,358	36
72	9/19/2022	12,325	12,146	36
73	9/19/2022	12,113	11,934	36
74	9/20/2022	11,901	11,722	36
75	9/20/2022	11,689	11,511	36
76	9/20/2022	11,477	11,299	36
77	9/20/2022	11,265	11,087	36
78	9/21/2022	11,054	10,875	36
79	9/21/2022	10,842	10,663	36
80	9/22/2022	10,630	10,452	36
81	9/22/2022	10,418	10,240	36
82	9/22/2022	10,206	10,028	36
83	9/22/2022	9,995	9,816	36
84	9/22/2022	9,783	9,604	36
85	9/23/2022	9,571	9,392	36
86	9/23/2022	9,359	9,181	36

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CHARLES JAMISON MSH 410H  
ATTACHMENT 1  
PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
87	9/23/2022	9,147	8,969	36
88	9/24/2022	8,935	8,757	36
89	9/24/2022	8,724	8,545	36
90	9/24/2022	8,512	8,333	36

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CHARLES JAMISON MSH 410H

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	7/30/2022	82.3	9,616	7,741	4,123	173,420	5,985	0
2	8/3/2022	78.9	9,232	6,701	4,912	310,940	11,359	0
3	8/9/2022	93.6	9,972	6,595	5,237	309,550	10,912	0
4	8/11/2022	83.1	9,278	6,566	5,543	313,620	11,768	0
5	8/13/2022	86.3	9,286	6,423	6,377	314,760	11,096	0
6	8/14/2022	81.7	9,114	7,302	5,851	311,850	13,887	0
7	8/31/2022	78.2	8,906	7,526	5,507	309,390	9,497	0
8	9/1/2022	77.7	8,653	6,988	5,227	317,350	10,237	0
9	9/1/2022	88.9	9,661	6,629	4,855	313,410	8,544	0
10	9/2/2022	81	8,904	6,068	4,511	313,440	9,682	0
11	9/2/2022	66	9,126	5,815	5,714	315,680	8,804	0
12	9/2/2022	81	8,949	6,863	5,091	316,590	8,942	0
13	9/3/2022	94.1	9,660	6,673	5,914	315,250	9,535	0
14	9/3/2022	92.6	9,786	6,336	5,460	308,880	9,330	0
15	9/3/2022	83.6	9,211	5,914	5,256	316,880	11,775	0
16	9/4/2022	85.8	9,046	7,221	5,362	311,460	9,168	0
17	9/4/2022	93.4	9,638	7,449	4,672	319,290	9,462	0
18	9/5/2022	83.2	8,895	6,871	4,852	310,470	9,302	0
19	9/5/2022	76.5	8,613	7,376	4,899	309,360	9,038	0
20	9/5/2022	84.8	9,390	7,522	4,808	311,570	8,567	0
21	9/5/2022	88.3	9,400	6,964	4,858	314,820	9,402	0
22	9/6/2022	91.8	9,342	6,566	5,186	310,130	9,300	0
23	9/6/2022	87.7	9,073	6,414	5,571	306,450	9,023	0
24	9/6/2022	84.9	9,582	5,507	5,633	304,050	8,707	0
25	9/6/2022	90.3	9,262	6,181	5,165	311,700	9,329	0
26	9/7/2022	84.2	9,084	6,543	4,930	312,750	9,303	0
27	9/7/2022	84.9	9,430	6,360	6,003	309,670	8,841	0
28	9/7/2022	93.5	9,613	7,022	5,224	308,270	8,638	0
29	9/7/2022	89.9	9,230	7,380	4,487	307,860	9,050	0
30	9/7/2022	88.6	8,853	6,489	4,882	309,810	9,210	0
31	9/8/2022	80.2	8,766	7,719	4,860	314,120	9,091	0
32	9/8/2022	86.6	8,993	5,822	5,147	312,680	8,900	0
33	9/8/2022	90.1	8,791	5,445	4,710	304,590	8,858	0
34	9/8/2022	92	9,138	6,267	4,586	312,190	8,979	0
35	9/9/2022	93	8,860	6,450	5,071	312,660	8,762	0
36	9/9/2022	85.4	8,312	5,916	5,774	321,660	11,842	0
37	9/10/2022	86.4	8,480	5,909	5,017	311,210	9,184	0
38	9/10/2022	87.2	8,798	6,447	4,897	312,160	8,716	0
39	9/10/2022	86.7	8,475	5,237	5,246	307,660	9,023	0
40	9/10/2022	85.3	8,150	6,344	5,218	311,180	8,809	0
41	9/11/2022	86.9	8,570	5,907	5,319	312,360	8,881	0
42	9/11/2022	93.2	8,896	6,870	5,024	312,000	8,456	0
43	9/11/2022	90.3	8,904	5,410	5,359	313,900	8,753	0
44	9/11/2022	88.4	8,614	7,144	4,673	318,760	9,226	0
45	9/12/2022	97.8	9,058	6,078	5,016	311,010	8,766	0
46	9/12/2022	91.9	8,394	5,233	5,836	311,110	8,703	0
47	9/12/2022	90.1	8,478	6,882	5,102	310,800	8,829	0
48	9/12/2022	98.1	8,816	6,550	5,233	308,010	8,778	0
49	9/13/2022	95.6	8,642	6,654	4,736	315,970	8,912	0
50	9/13/2022	87.3	8,042	5,446	6,009	312,340	8,602	0
51	9/13/2022	94.6	8,506	6,919	5,225	313,060	8,560	0
52	9/13/2022	91.7	8,170	6,119	4,874	312,580	8,915	0
53	9/13/2022	95.3	8,158	5,536	4,733	312,490	8,641	0

OIL, GAS AND GAS  
 DEC 15 2022  
 WV Dept of Environmental Protection

CHARLES JAMISON MSH 410H

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	9/14/2022	99	8,524	5,857	5,721	309,810	8,844	0
55	9/14/2022	99	8,368	6,769	5,405	309,930	8,556	0
56	9/14/2022	99	8,466	5,394	6,018	314,220	8,217	0
57	9/14/2022	94.6	8,241	6,895	5,835	311,490	8,692	0
58	9/15/2022	98.6	8,500	6,509	5,230	311,910	8,854	0
59	9/15/2022	98.7	8,482	5,453	5,960	314,550	8,701	0
60	9/15/2022	90.3	7,818	6,734	5,978	312,770	9,782	0
61	9/16/2022	97.3	8,635	7,097	5,955	316,170	8,763	0
62	9/16/2022	92.2	7,993	6,652	6,008	314,920	8,505	0
63	9/16/2022	98.9	8,194	5,072	5,783	311,130	8,707	0
64	9/17/2022	88.8	7,952	6,809	5,726	320,820	8,356	0
65	9/17/2022	82.5	7,480	6,896	5,602	316,140	8,744	0
66	9/17/2022	73	6,428	6,122	5,490	308,520	9,833	0
67	9/18/2022	98.4	8,188	6,394	5,889	314,700	7,732	0
68	9/18/2022	94.6	8,140	5,955	5,518	314,090	7,666	0
69	9/18/2022	94.6	7,867	6,905	5,811	312,750	7,720	0
70	9/19/2022	98.9	8,295	5,547	5,236	312,798	7,946	0
71	9/19/2022	99.1	8,289	7,099	5,855	318,340	8,543	0
72	9/19/2022	96	7,895	7,008	5,883	308,790	7,634	0
73	9/19/2022	96	8,067	7,259	5,648	307,150	7,605	0
74	9/20/2022	94.7	7,865	6,286	5,337	313,010	7,501	0
75	9/20/2022	92.1	7,857	7,088	5,455	315,300	7,755	0
76	9/20/2022	99.5	7,958	6,131	5,288	309,600	7,421	0
77	9/21/2022	96.3	8,152	6,941	5,314	311,960	7,354	0
78	9/21/2022	85.4	7,414	6,836	6,351	307,600	7,022	0
79	9/21/2022	92	8,072	7,132	5,804	312,900	7,633	0
80	9/22/2022	92.2	7,953	6,240	5,423	319,560	9,825	0
81	9/22/2022	97.9	7,976	6,184	5,645	316,400	7,583	0
82	9/22/2022	96	7,918	6,231	5,912	317,970	7,818	0
83	9/22/2022	83.5	7,301	7,693	5,144	315,450	7,079	0
84	9/23/2022	93.3	7,628	7,535	5,663	310,870	7,850	0
85	9/23/2022	99	7,664	6,755	5,862	311,980	7,532	0
86	9/23/2022	98	7,526	6,537	5,780	310,500	7,519	0
87	9/24/2022	99.5	7,833	6,675	5,123	311,130	7,358	0
88	9/24/2022	98.7	7,716	5,680	5,264	313,710	7,596	0
89	9/24/2022	98.6	7,870	6,983	5,565	317,140	7,491	0
90	9/24/2022	99.5	7,815	7,149	6,050	313,510	7,516	0

RECEIVED  
Office of Oil and Gas  
DEC 15 2022  
Department of Environmental Protection

Latitude: 39°50'00" (SHL)

SURFACE HOLE 6,790'

BOTTOM HOLE 7,050'

Latitude: 39°47'30" (BHL)



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
120 GENESIS BOULEVARD
BRIDGEPORT, WV 26330
304-933-3119

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

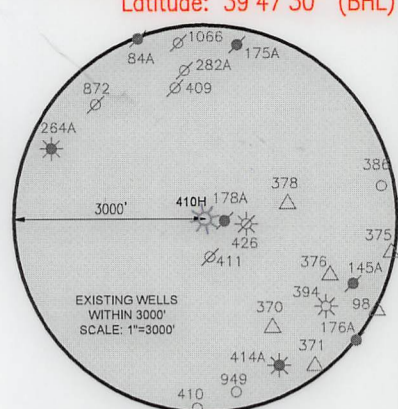
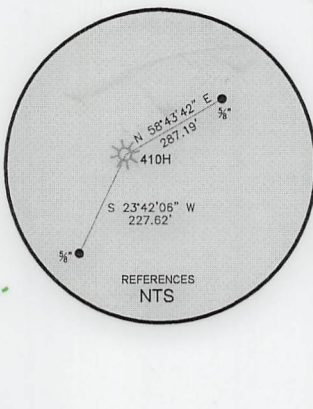
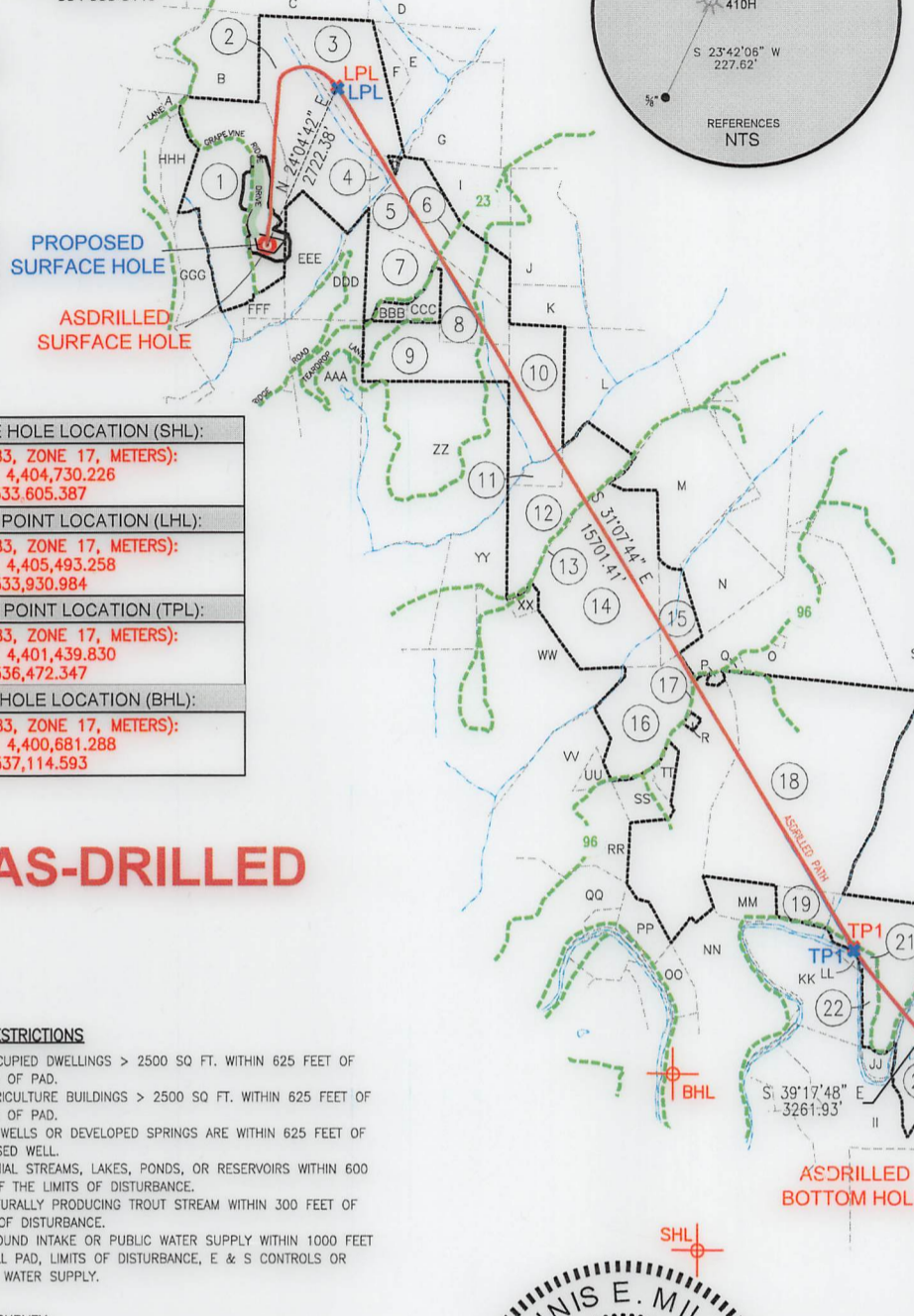


Table with 4 rows: PERMIT SURFACE HOLE LOCATION (SHL), PERMIT LANDING POINT LOCATION (LHL), PERMIT TURNING POINT LOCATION (TPL), PERMIT BOTTOM HOLE LOCATION (BHL). Each row includes UTM coordinates.

Table with 4 rows: SURFACE HOLE LOCATION (SHL), LANDING POINT LOCATION (LHL), TURNING POINT LOCATION (TPL), BOTTOM HOLE LOCATION (BHL). Each row includes UTM coordinates.

AS-DRILLED

WELL RESTRICTIONS

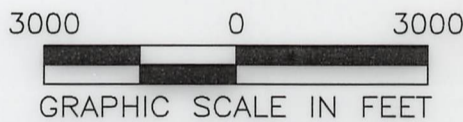
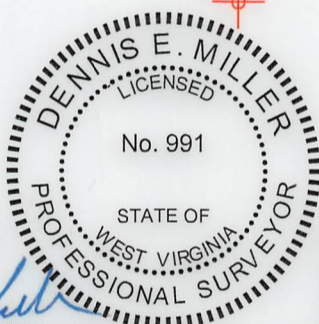
- 1. NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
3. WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 625 FEET OF PROPOSED WELL.
4. PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 600 FEET OF THE LIMITS 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. 991



Longitude: 80°32'30" (BHL)
Longitude: 80°35'00" (SHL)

COMPANY: SWN Production Company, LLC

CHARLES JAMISON MSH
OPERATOR'S WELL #: 410H
API WELL #: 47 051 02425
STATE COUNTY PERMIT

WELL TYPE: OIL [ ] WASTE DISPOSAL [ ] PRODUCTION [X] DEEP [ ] GAS [X] LIQUID INJECTION [ ] STORAGE [ ] SHALLOW [X]
WATERSHED: MAGGOTY RUN
DISTRICT: LIBERTY DISTRICT COUNTY: MARSHALL
SURFACE OWNER: CHARLES AND JEAN JAMISON
OIL & GAS ROYALTY OWNER: CHARLES AND JEAN JAMISON
ELEVATION: 1337.3'
QUADRANGLE: CAMERON
ACREAGE: 97.2±

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
ADDRESS: 1300 FORT PIERPONT DRIVE, STE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, STE 201
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: 8-05-2022
DRAWN BY: K.E.S.
SCALE: 1" = 3000'
DRAWING NO: 170-426
WELL LOCATION PLAT



CIVIL & ENVIRONMENTAL CONSULTANTS, INC.  
 120 GENESIS BOULEVARD  
 BRIDGEPORT, WV 26330  
 304-933-3119

WELL BORE TABLE FOR SURFACE OWNERS		
TRACT	SURFACE OWNER	TAX PARCEL
1	CHARLES AND JEAN JAMISON	07-007-0006
2	KENNETH WAYNE STEELE REVOCABLE LIVING TRUST AGREEMENT	07-007-0011
3	ANTHONY M. SKRYPEK	07-007-0010
4	GAIL L. ZWICK - LIFE	07-006-0008
5	CNX LAND, LLC	07-006-0010
6	CO. RT. 23 ROW (CAMERON RIDGE ROAD)	
7	GAIL L. ZWICK - LIFE	07-006-0012.1
8	CNX LAND, LLC	07-006-0012
9	ROBIN E. AND DONALD QUIGLEY	07-010-0020
10	ROBIN E. AND DONALD QUIGLEY	07-011-0001
11	CNX LAND, LLC	07-011-0002
12	CNX LAND, LLC	07-011-0003
13	FISH RIDGE ROAD ROW	
14	SCOTT C. MARLING AND JESSICA L. PARRY	07-011-0004
15	ELLEN MARIE QUIGLEY	07-011-0005
16	ELLEN MARIE QUIGLEY	07-016-0036
17	CO. RT. 96 ROW	
18	HINKLE FAMILY TRUST	07-015-0001
19	HINKLE FAMILY TRUST	07-015-0019
20	DAVID W. JR. AND MELANIE A. HUMMEL	07-015-0017
21	WILLIAM H. AND GAIL K. PORTER	07-015-0017.2
22	WILLIAM H. AND GAIL K. PORTER	07-015-0017.1
23	MOUNTAIN VIEW REALTY LLC	07-020-0025
24	MOUNTAIN VIEW REALTY LLC	07-015-0014
25	AMMON A. BURLEY, ET UX	07-020-0026

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	MARSHALL COUNTY COAL RESOURCES INC.	07-007-0007
B	KENNETH WAYNE STEELE REVOCABLE LIVING TRUST AGREEMENT	07-007-0008.1
C	JEAN JAMISON	07-007-0009.1
D	ANTHONY M. SKRYPEK	07-006-0002
E	ANTHONY M. SKRYPEK	07-006-0005
F	ANTHONY M. SKRYPEK	07-006-0004
G	CNX LAND, LLC	07-006-0006
H	GAIL L. ZWICK - LIFE	07-006-0007
I	CNX LAND, LLC	07-006-0009
J	MARVIN AND SHIRLEY BYARD	07-006-0013
K	MARVIN AND SHIRLEY BYARD	07-006-0014
L	CNX LAND, LLC	07-011-0008
M	DOUGLAS AND DEANA MCCOMBS	07-011-0007
N	AMANDA MARIE LINDSEY, ANDREW DAVID MCCURDY AND TIMOTHY S. MCCURDY	07-011-0006
O	ELLEN MARIE QUIGLEY AND DIANA MATHEWS	07-011-0017
P	ANDREW MCCURDY, ET UX	07-016-0036.2
Q	ANDREW DAVID MCCURDY	07-011-0017.1
R	ELLEN MARIE QUIGLEY	07-016-0036.1
S	DONALD MACK QUIGLEY, ET UX	07-011-0018
T	DOUGLAS R. AND REBECCA J. MCCOMBS	07-011-0019
U	DAVID W. HUMMEL JR. AND MELANIE A. HUMMEL	07-015-0001.1
V	DAVID W. HUMMEL JR. AND MELANIE A. HUMMEL	07-015-0002
W	CODY MILLER	07-015-0012
X	TREVOR L. NEELY	07-015-0012.1
Y	MOUNTAIN VIEW REALTY, LLC.	07-015-0015
Z	MOUNTAIN VIEW REALTY, LLC.	07-015-0016
AA	JANEEN L. CZOLBA	07-015-0014.1
BB	BEAU V. MARTIN AND AMELIA D. YOUNG	07-015-0015.1
CC	VICTOR J. SEIFERT, ET UX - DARRELL H. II AND VICKI A. MCNEELY	07-020-0027
DD	SEAN D. AND DEBBIE L. HALL	07-020-0028
EE	RICARDO S. GREGG, ET UX	07-020-0032
FF	MONTANA SKY LLC	07-020-0032.1
GG	DENNIS DEAN HALL, ET UX	07-020-0035
HH	AMMON A. BURLEY	07-020-0037
II	AMMON A. BURLEY	07-020-0024
JJ	WILLIAM H. AND GAIL K. PORTER	07-015-0017.3
KK	CYNTHIA ANTILL, JOANNE M. HATZELL, CLAUDE R. STEPHENS, JR. AND EDWARD K. STEPHENS	07-020-0023
LL	HAROLD LEROY DOTY JR.	07-015-0018
MM	DANIEL W. DEVER, DAVID S. DEVER, GREGORY T. DEVER, JOHN A. DEVER, LAWRENCE A. DEVER AND DEBORAH KAY KINCAID	07-020-0022
NN	FRANCES IRENE ALLEN, ET AL	07-020-0021
OO	JOHN E. RIGGS, ET UX	07-016-0044
PP	BARBARA R. ARDENO, ET AL	07-016-0037
QQ	JOHN MATTHEW BUTLER	07-016-0039
RR	DAVID L. ELSON, ET UX	07-016-0034
SS	TERRY A. AND DONNA L. BONAR	07-016-0035
TT	STEPHANIE L. WHITE	07-016-0036.3
UU	DAVID L. ELSON, ET UX	07-016-0032
VV	ELLEN MARIE QUIGLEY	07-016-0033
WW	RUSSELL ALLEN JR. AND JODI D. DOTSON	07-016-0031
XX	RYAN HILL	07-016-0031.1
YY	MICHAEL KNOWLTON	07-010-0025
ZZ	JAN CAROL DOBBS, TRUSTEE OF THE G AND JAN DOBBS FAMILY TRUST AND ERIC SCOTT DOBBS	07-010-0021
AAA	MARSHALL COUNTY COAL RESOURCES INC.	07-010-0019
BBB	DONALD W. AND MARTHA J. KENNEDY	07-006-0011.1
CCC	STEPHEN L. AND PAMELA SCOTT	07-006-0011
DDD	GAIL L. ZWICK - LIFE	07-007-0014
EEE	GAIL L. ZWICK - LIFE	07-007-0012
FFF	TIMOTHY R. CAIN	07-007-0006.1
GGG	TIMOTHY R. CAIN	07-007-0006.2
HHH	MARSHALL COUNTY COAL RESOURCES INC.	07-007-0006.3

**AS-DRILLED**

API WELL #: **47** **051** **02425**  
 STATE COUNTY PERMIT

REVISIONS:	COMPANY:			
	OPERATOR'S		CHARLES JAMISON MSH	
	WELL #:		410H	
	DISTRICT:	COUNTY:	STATE:	DATE: 8-05-2022
	LIBERTY DISTRICT	MARSHALL	WV	DRAWN BY: K.E.S.
				SCALE: N/A
				DRAWING NO: 170-426
				WELL LOCATION PLAT 2