

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

API 47009003370000 County BROOKE District BUFFALO
Quad BETHANY, WV Pad Name SAMUEL JONES-BRK-PADI Field/Pool Name PANHANDLE FIELD WET
Farm Name SAMUEL E. & JUDITH F. JONES Well Number SAMUEL JONES BRK 10H
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
Top Hole Northing 4,448,990.98 Easting 537,367.62
Landing Point of Curve Northing 4,448,965.54 Easting 537,716.32
Bottom Hole Northing 4,444,549.31 Easting 539,472.76

Elevation (ft) 1,204' 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-Wor Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other
Type of Completion Single Multiple Fluids Produce 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 2023-06-05 Date drilling commenced 2023-07-14 Date drilling ceased 2023-07-27
Date Completion activities began 2023-08-22 Date Completion activities ceased 2023-09-27
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 265' Oprn mine(s) (Y/N) depths N
Salt water depth(s) ft 540' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 370' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Office of Oil and Gas
DEC 19 2023
WV Department of
Environmental Protection

APPROVED

Reviewed by: [Signature]
02/23/2024

API 47009003370000

Farm name SAMUEL E. & JUDITH F. JONES

Well number SAMUEL JONES BRK 10H

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	24.000	20.000	136	NEW	94.00	J-55		Y
Surface	17.500	13.375	326	NEW	54.50	J-55		Y/ 40 BBLs
Coal	SEE INTERMED							
Intermediate 1	12.250	9.625	1810	NEW	36.00	J-55	251.2'	Y/ 40 BBLs
Intermediate 2								
Intermediate 3								
Production	8.500	5.500	22201	NEW	20.00	P-110 HP		Y/ 52 BBLs
Tubing		2.875	6580	NEW	6.50	P-110		N
Packer type and depth set								

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft3/sks)	Volume (ft2)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	378	15.6	1.19	449.82	SURFACE	8
Coal	SEE INTERMED						
Intermediate 1	CLASS A	719	15.6	1.19	855.61	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4247	14.5	1.29	5478.63	SURFACE	24
Tubing							

Drillers TD (ft) 22,201

Loggers TD (ft) 22,201

Deepest formation penetrated MARCELLUS

Plug back to (ft) 22,109

Plug back procedure N/A

Kick off depth (ft) 5,565' 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: **6** CENTRALIZERS - EVERY THIRD JOINT OF CASING

INTERMEDIATE: **21** CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: **457** CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

WAS WELL COMPLETED AS SHOT HOLE Yes No Details _____

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WAS WELL COMPLETED AS OPEN HOLE Yes No Details _____

DEC 19 2023

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

WV Department of
Environmental Protection

02/23/2024

LATITUDE: 40°12'30" SURFACE HOLE (2000' SCALE) ← 5,473'

← 10,205'

LATITUDE: 40°10'00" BOTTOM HOLE (2000' SCALE)

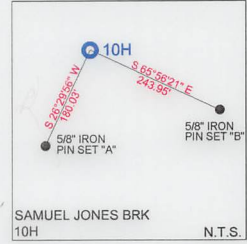
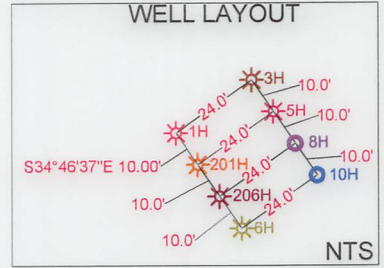
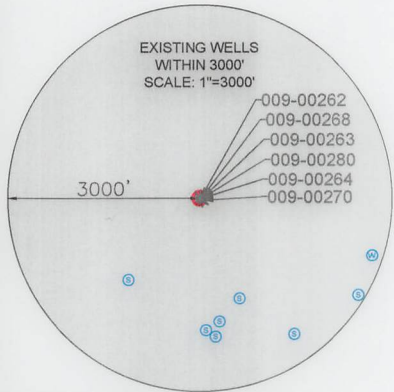
5,958'
6,533'
LONGITUDE: 80°30'00" BOTTOM HOLE (2000' SCALE)
LONGITUDE: 80°32'30" SURFACE HOLE (2000' SCALE)



www.jhacompanies.com

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

LINE	BEARING	DISTANCE
L1	S60°51'13"E	2564.24'
L2	S53°14'41"E	2223.45'



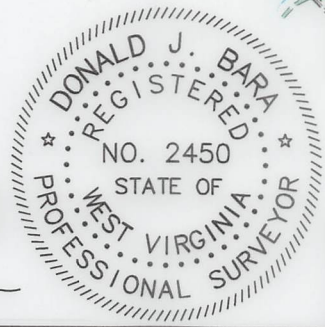
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4448990.98 EASTING: 537367.62
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4448965.54 EASTING: 537716.32
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4444549.31 EASTING: 539472.76
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4448992.19 EASTING: 537366.86
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4448972.14 EASTING: 537713.95
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4444550.96 EASTING: 539476.88

NOTES ON SURVEY

- COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2450



2000 0 2000

GRAPHIC SCALE IN FEET

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

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SOURCE OF SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>SAMUEL JONES BRK</p> <p>OPERATOR'S WELL #: 10H</p> <p>API WELL #: 47 STATE 009 COUNTY 00337 PERMIT</p>
	<p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: UPPER OHIO SOUTH ELEVATION: 1204.0'</p> <p>DISTRICT: BUFFLO COUNTY: BROOKE QUADRANGLE: BETHANY, WV</p> <p>SURFACE OWNER: SAMUEL E. & JUDITH F. JONES ACREAGE: ±164.74</p> <p>OIL & GAS ROYALTY OWNER: RESOURCE MINERAL HEADWATER I, LP ACREAGE: ±164.74</p> <p>DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED 02/23/2024</p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,412' TVD 22,201' TMD</p>	<p>WELL OPERATOR: SWN PRODUCTION COMPANY, LLC</p> <p>ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201</p> <p>CITY: MORGANTOWN STATE: WV ZIP CODE: 26508</p>

LEGEND:	REVISIONS:	DATE:
<ul style="list-style-type: none"> ○ EXISTING BOTTOM HOLE ⊛ EXISTING / PRODUCING WELLHEAD LPL⊛ EXISTING LANDING POINT LOCATION ○ PROPOSED SURFACE HOLE / BOTTOM HOLE LPL⊛ PROPOSED LANDING POINT LOCATION — ACCESS ROAD — PUBLIC ROAD — FLOOD PLAN — LEASE BOUNDARY — AS-DRILLED PATH — PROPOSED PATH 	<ul style="list-style-type: none"> DATE: 08-03-2023 API NO: 47-009-00337 DRAWN BY: Z. WOOD SCALE: 1" = 2000' DRAWING NO: 2019-0265 WELL LOCATION PLAT 	

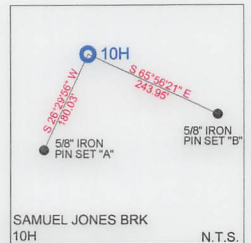
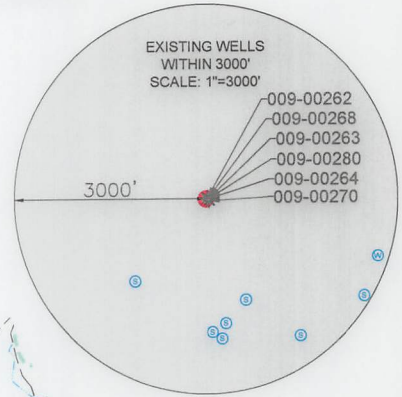
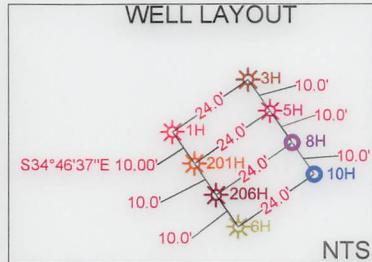
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LATITUDE: 40°10'00" BOTTOM HOLE (2000' SCALE) 10,205'

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6,533'
LONGITUDE: 80°30'00" BOTTOM HOLE (2000' SCALE)
LONGITUDE: 80°32'30" SURFACE HOLE (2000' SCALE)

JHA ENGINEERS SURVEYORS ENVIRONMENTAL GIS MAPPING
www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43950
740-695-6100

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, U.S. FT



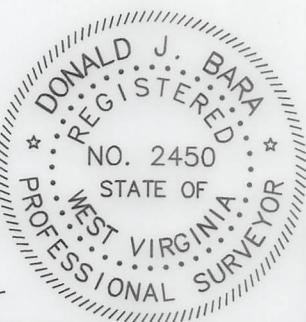
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NOTES ON SURVEY

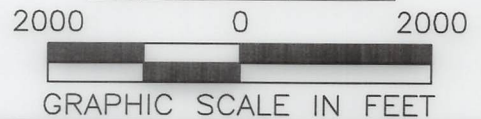
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P.S. 2450



LINE	BEARING	DISTANCE
L1	S60°51'13"E	2564.24'
L2	S53°14'41"E	2223.45'



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

OPERATOR'S WELL #:	SAMUEL JONES BRK 10H		
API WELL #:	47	009	00337
	STATE	COUNTY	PERMIT

WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>
WATERSHED: UPPER OHIO SOUTH
DISTRICT: BUFFLO COUNTY: BROOKE
SURFACE OWNER: SAMUEL E. & JUDITH F. JONES
OIL & GAS ROYALTY OWNER: RESOURCE MINERAL HEADWATER I, LP
DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/>
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED 02/23/2024
TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: 6,412' TVD 22,201' TMD

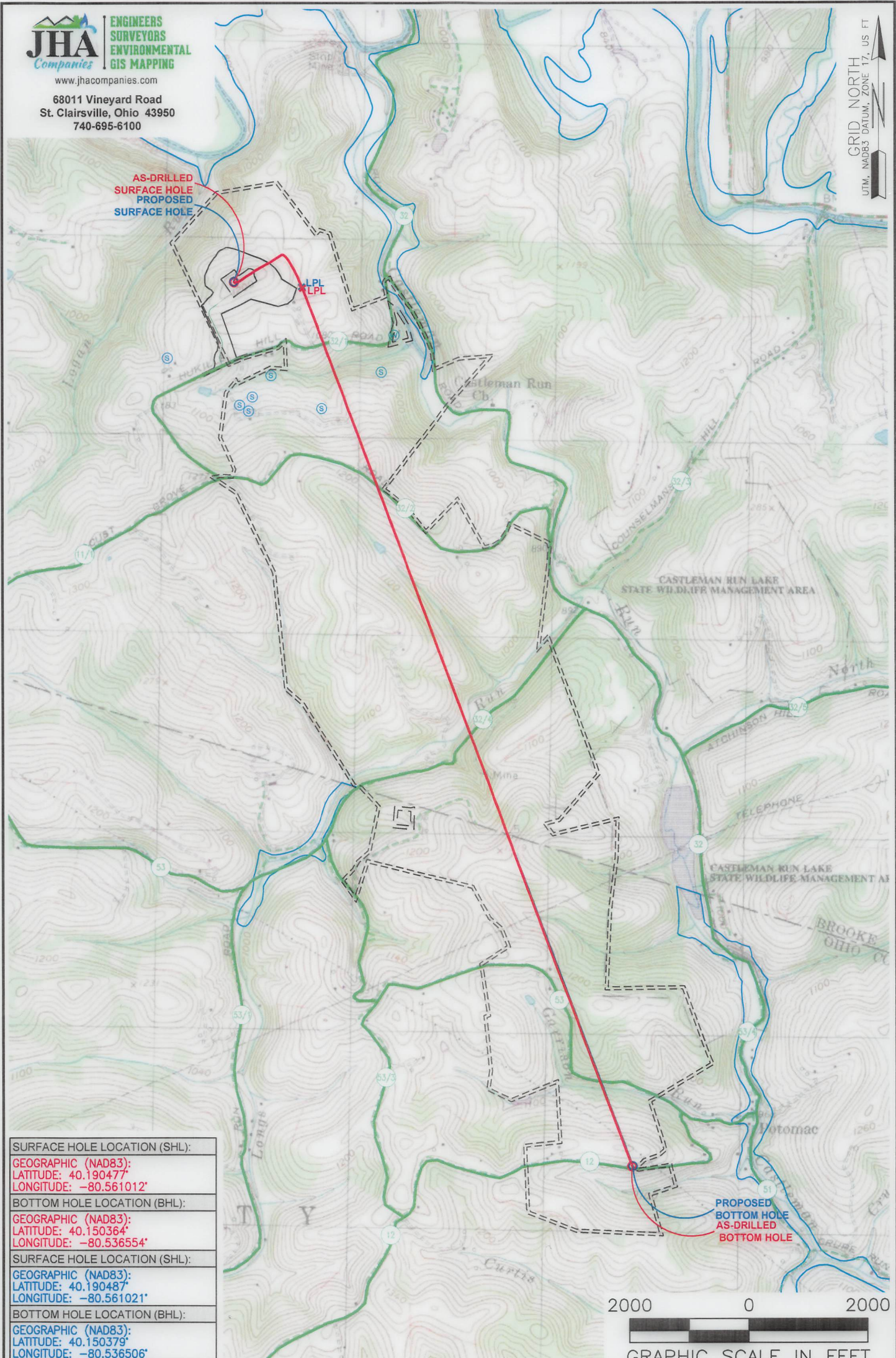
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201	ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508	CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

LEGEND:	REVISIONS:	DATE: 08-03-2023
○ EXISTING BOTTOM HOLE	— ACCESS ROAD	API NO: 47-009-00337
⊙ EXISTING / PRODUCING WELLHEAD	— PUBLIC ROAD	DRAWN BY: Z. WOOD
LPL ⊙ EXISTING LANDING POINT LOCATION	— FLOOD PLAIN	SCALE: 1" = 2000'
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	— LEASE BOUNDARY	DRAWING NO: 2019-0265
LPL ⊙ PROPOSED LANDING POINT LOCATION	— ASDRILLED PATH	WELL LOCATION PLAT
	— PROPOSED PATH	

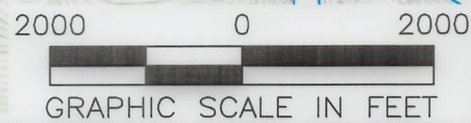
ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	PRESLIE ROWAN LLC	3-B43-33
B	FONNER MARY LOU	3-B43-58
C	PUSKARICH TRACY T	3-B43-59
D	WV ST OF DEPT OF COMM DIV OF NAT RE WILDLIFE RES SEC	3-B43-62
E	HOGAN ANDREW P	3-B48-34
F	SMITH DEAN S	3-B48-32
G	CAMMARATA NICHOLAS J & JENNIFER C (SURV)	3-B48-25
H	LYCANS AUDIE	3-B48-26
I	WOOD RICHARD A JR & MELANIE (VOYTEK) (SURV)	3-B48-28
J	WOOD RICHARD A & MELANIE	3-B48-29
K	WOOD RICHARD A & MELANIE	3-B48-29
L	MCNICHOLAS JOHN WALTER III	3-B48-36
M	MCNICHOLAS JOHN WALTER III	3-B48-36
N	WALDEN DANIEL E & MARY VIRGNIA	3-B48-37
O	WALDEN DANIEL E & MARY VIRGNIA	3-B48-37
P	WEST VIRGINIA STATE OF - DIVISION OF NATURAL RESOURCES	3-B49-15
ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	PRESLIE ROWAN LLC	3-B43-33
B	FONNER MARY LOU	3-B43-58
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L	MCNICHOLAS JOHN WALTER III	3-B48-36
M	MCNICHOLAS JOHN WALTER III	3-B48-36
N	WALDEN DANIEL E & MARY VIRGNIA	3-B48-37
O	WALDEN DANIEL E & MARY VIRGNIA	3-B48-37
P	WEST VIRGINIA STATE OF - DIVISION OF NATURAL RESOURCES	3-B49-15
Q	GRIMES DONALD; ANTHONY	3-B48-39
R	STATE OF WV CONSERVATION COMM DIV OF NAT RES PUB LAND CORP	3-L3-1
S	STATE OF WV CONSERVATION COMM	3-L3-1.1
T	PARRISH EDGAR	3-L6-2.2
U	ATKINSON GREGORY D; ET AL C/O JENNIFER TUCKER	3-L6-10.2
V	GEAR LURA MARIE	3-L6-9.1
W	COWAN CHERYL ANN	3-L6-21
X	MORMANIS GREGORY N AND SHARON LEE	3-L6-13
Y	TOMINACK JOHN I JR	3-L5-10
Z	ENNIS MARJORIE G	3-L5-8
AA	HAYS TIMOTHY R & THELMA C	3-L5-29
AB	COX CHAD & JULIE C	3-L2-12
AC	LEMASTERS G L JR	3-L2-12.1
AD	DEARING JEREMY R & TANYA N	3-L2-12.3
AE	BREITINGER MICHAEL	3-L2-11
AF	SONDA SCOTT, SONDA MARK	3-L2-2
AG	WINDSOR COAL COMPANY	3-L2-9
AH	SONDA SCOTT; SONDA MARK	3-L2-1
AI	STONE MARION P	3-B48-19
AJ	STONE MARC P	3-B48-17
AK	BOHACH JENNIFER LYNNE PYLE; SEIDEWITZ WENDY RAY PYLE (JTWS)	3-B48-18
AL	WINDSOR POWER HOUSE COAL CO	3-B48-21
AM	NORDEN ANNA MAE (TOD); NORDEN - SMITH KATHERINE ETAL	3-B48-22
AN	CHAMBERS CHARLOTTE A	3-B48-23
AO	NORDEN ANNA MAE (TOD)	3-B48-22
AP	CORWIN BRIAN DAVID	3-B43-22
AQ	BETHANY COLLEGE	3-B38-31
AR	AYERS ALBERT GLENN & REBECCA ANN (SURV)	3-B43-61
AS	OHARA MATTHEW JAMES; OHARA DEIRDRA (LIFE ESTATE)	3-L2-10

02/23/2024

REVISIONS:	COMPANY: SWN Production Company, LLC		SWN ^{R+} _A ^{V+} _o Production Company™	
	OPERATOR'S SAMUEL JONES BRK		DATE: 08-03-2023	
	WELL #: 10H		API NO: 47-009-00337	
	DISTRICT: BUFFLO	COUNTY: BROOKE	STATE: WV	DRAWN BY: Z. WOOD
				SCALE: N/A
				DRAWING NO: 2019-0265
				WELL LOCATION PLAT



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.190477° LONGITUDE: -80.561012°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.150364° LONGITUDE: -80.536554°
SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.190487° LONGITUDE: -80.561021°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83): LATITUDE: 40.150379° LONGITUDE: -80.536506°



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:	02/23/2024
● EXISTING BOTTOM HOLE	— ACCESS ROAD
☼ EXISTING / PRODUCING WELLHEAD	— PUBLIC ROAD
LPL ● EXISTING LANDING POINT LOCATION	— FLOOD PLAN
● PROPOSED SURFACE HOLE / BOTTOM HOLE	— LEASE BOUNDARY
LPL ● PROPOSED LANDING POINT LOCATION	— AS DRILLED PATH
	— PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: SAMUEL JONES BRK	WELL # 10H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY: BROOKE	CODE: XXX	DISTRICT: BUFFLO
SURFACE OWNER: SAMUEL E. & JUDITH F. JONES	USGS 7 1/2 QUADRANGLE MAP NAME: BETHANY, WV		
		API # 47-009-00337	

**SAMUEL JONES BRK 10H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	8/9/2023	22,108	22,018	36
2	8/23/2023	21,984	21,807	36
3	8/23/2023	21,774	21,597	36
4	8/23/2023	21,564	21,387	36
5	8/24/2023	21,354	21,176	36
6	8/24/2023	21,143	20,966	36
7	8/24/2023	20,933	20,756	36
8	8/25/2023	20,723	20,546	36
9	8/25/2023	20,513	20,336	36
10	8/25/2023	20,303	20,126	36
11	8/25/2023	20,093	19,916	36
12	8/26/2023	19,882	19,705	36
13	8/26/2023	19,672	19,495	36
14	8/26/2023	19,462	19,285	36
15	8/26/2023	19,252	19,075	36
16	8/26/2023	19,042	18,865	36
17	8/27/2023	18,832	18,655	36
18	8/27/2023	18,622	18,444	36
19	8/27/2023	18,411	18,234	36
20	8/27/2023	18,201	18,024	36
21	8/27/2023	17,991	17,814	36
22	8/27/2023	17,781	17,604	36
23	8/27/2023	17,571	17,394	36
24	8/28/2023	17,361	17,184	36
25	8/28/2023	17,151	16,973	36
26	8/28/2023	16,940	16,763	36
27	8/28/2023	16,730	16,553	36
28	8/28/2023	16,520	16,343	36
29	8/28/2023	16,310	16,133	36
30	8/29/2023	16,100	15,923	36
31	8/29/2023	15,890	15,713	36
32	8/29/2023	15,679	15,502	36
33	8/29/2023	15,469	15,292	36
34	8/29/2023	15,259	15,082	36
35	8/29/2023	15,049	14,872	36
36	8/30/2023	14,839	14,662	36
37	8/30/2023	14,629	14,452	36
38	8/30/2023	14,419	14,241	36
39	8/30/2023	14,208	14,031	36
40	8/30/2023	13,998	13,821	36
41	8/31/2023	13,788	13,611	36
42	8/31/2023	13,578	13,401	36

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**SAMUEL JONES BRK 10H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
43	8/31/2023	13,368	13,191	36
44	8/31/2023	13,158	12,981	36
45	8/31/2023	12,948	12,770	36
46	8/31/2023	12,737	12,560	36
47	9/1/2023	12,527	12,350	36
48	9/1/2023	12,317	12,140	36
49	9/1/2023	12,107	11,930	36
50	9/1/2023	11,897	11,720	36
51	9/1/2023	11,687	11,510	36
52	9/2/2023	11,476	11,299	36
53	9/2/2023	11,266	11,089	36
54	9/2/2023	11,056	10,879	36
55	9/2/2023	10,846	10,669	36
56	9/2/2023	10,636	10,459	36
57	9/2/2023	10,426	10,249	36
58	9/3/2023	10,216	10,038	36
59	9/3/2023	10,005	9,828	36
60	9/3/2023	9,795	9,618	36
61	9/3/2023	9,585	9,408	36
62	9/3/2023	9,375	9,198	36
63	9/3/2023	9,165	8,988	36
64	9/4/2023	8,955	8,778	36
65	9/4/2023	8,745	8,567	36
66	9/4/2023	8,534	8,357	36
67	9/4/2023	8,324	8,147	36
68	9/4/2023	8,114	7,937	36
69	9/4/2023	7,904	7,727	36
70	9/5/2023	7,694	7,517	36
71	9/5/2023	7,484	7,307	36
72	9/5/2023	7,273	7,096	36
73	9/5/2023	7,063	6,886	36
74	9/5/2023	6,853	6,676	36
75	9/5/2023	6,643	6,466	36

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**FRANZ THOMAN OHI 201H
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	8/23/2023	91.4	9,328	9,400	4,700	218,750	6,748	0
2	8/23/2023	97.1	9,870	5,906	4,491	374,560	9,448	0
3	8/23/2023	88	8,851	5,319	4,650	378,590	9,311	0
4	8/24/2023	98.1	9,155	6,224	4,554	372,940	9,511	0
5	8/24/2023	95.5	9,693	4,887	4,544	372,810	8,858	0
6	8/24/2023	95.3	9,662	5,265	3,900	374,340	8,409	0
7	8/24/2023	83.5	8,660	6,610	5,015	373,550	9,267	0
8	8/25/2023	83.4	8,265	6,572	4,422	376,460	9,804	0
9	8/25/2023	93.7	9,486	6,642	4,842	372,170	8,368	0
10	8/25/2023	83	8,238	6,440	4,895	372,580	9,094	0
11	8/25/2023	97.7	9,968	6,780	5,000	373,290	8,250	0
12	8/26/2023	94.4	9,119	6,350	4,890	375,020	8,095	0
13	8/26/2023	97.7	9,312	6,675	4,508	375,500	8,221	0
14	8/26/2023	98.5	9,501	6,209	5,177	370,320	8,375	0
15	8/26/2023	98.4	9,721	6,407	4,838	371,420	8,242	0
16	8/26/2023	91.7	9,250	6,610	4,890	368,120	8,044	0
17	8/27/2023	96.3	9,787	6,650	4,875	374,500	8,170	0
18	8/27/2023	97.1	9,335	6,490	4,632	378,200	8,153	0
19	8/27/2023	91.5	9,794	6,718	4,553	372,380	8,086	0
20	8/27/2023	96.2	9,681	6,225	4,552	374,480	8,051	0
21	8/27/2023	92.6	8,840	6,415	5,290	373,500	7,981	0
22	8/27/2023	98.3	9,367	6,385	4,830	376,900	8,241	0
23	8/28/2023	98	9,576	6,145	4,920	383,020	8,220	0
24	8/28/2023	90.8	8,256	6,405	4,593	387,160	8,537	0
25	8/28/2023	97.3	9,366	5,930	4,780	376,740	7,861	0
26	8/28/2023	96.4	9,601	6,096	4,825	377,950	8,081	0
27	8/28/2023	94.3	8,601	6,253	5,000	367,630	8,082	0
28	8/28/2023	92.1	8,854	6,500	5,000	375,640	7,878	0
29	8/28/2023	90.5	8,857	6,830	5,000	373,100	8,443	0
30	8/29/2023	88.9	8,651	6,607	4,416	375,270	8,176	0
31	8/29/2023	98.2	9,326	6,624	4,682	373,120	7,912	0
32	8/29/2023	91.5	8,815	6,159	4,647	369,640	7,923	0
33	8/29/2023	98.7	8,861	6,721	5,100	369,220	7,822	0
34	8/29/2023	91.6	8,590	6,685	4,845	375,920	7,769	0
35	8/30/2023	94	9,249	7,255	4,800	374,580	7,902	0
36	8/30/2023	97.1	8,873	6,717	4,567	379,140	8,193	0
37	8/30/2023	88.2	8,165	6,340	4,403	374,660	8,098	0
38	8/30/2023	91.6	8,606	6,560	4,499	374,800	8,174	0
39	8/30/2023	83.9	7,175	6,371	4,971	368,040	7,861	0
40	8/30/2023	80.1	7,777	7,628	4,854	368,780	8,027	0
41	8/31/2023	87.8	8,066	5,250	4,766	371,700	7,920	0
42	8/31/2023	84.6	7,750	6,293	4,675	368,040	7,846	0
43	8/31/2023	84	7,966	6,231	4,496	372,440	8,089	0
44	8/31/2023	85.5	7,777	6,523	4,715	373,760	7,885	0
45	8/31/2023	85.5	7,772	6,626	5,081	375,540	7,863	0
46	9/1/2023	84.6	7,725	6,125	5,221	372,880	7,734	0
47	9/1/2023	84.6	7,233	5,888	5,202	369,660	7,687	0
48	9/1/2023	89.9	7,713	6,318	4,262	381,500	7,765	0
49	9/1/2023	81.8	7,463	5,856	4,702	376,740	7,742	0
50	9/1/2023	82	7,378	6,125	4,916	367,500	7,600	0
51	9/1/2023	84.6	7,281	5,616	4,788	358,060	7,437	0
52	9/2/2023	83.6	7,330	6,207	5,424	371,900	7,719	0
53	9/2/2023	79	6,963	6,277	4,462	372,920	7,865	0

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**FRANZ THOMAN OHI 201H
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/other
54	9/2/2023	93.3	7,765	6,180	4,456	366,700	7,593	0
55	9/2/2023	92.7	7,412	6,494	4,276	370,480	7,510	0
56	9/2/2023	84	6,789	5,528	5,824	372,560	7,527	0
57	9/3/2023	89	7,509	5,592	4,558	363,540	7,511	0
58	9/3/2023	89.8	7,179	5,968	4,537	377,520	7,787	0
59	9/3/2023	92	7,264	6,164	4,308	372,360	7,746	0
60	9/3/2023	91.1	7,023	5,749	4,467	371,780	7,591	0
61	9/3/2023	90.7	7,367	5,767	4,427	374,280	7,333	0
62	9/3/2023	86.2	6,666	5,839	5,123	371,520	7,510	0
63	9/3/2023	80	6,534	5,656	5,544	370,940	7,627	0
64	9/4/2023	87.8	7,176	5,454	4,960	377,440	7,520	0
65	9/4/2023	81.1	6,556	6,021	4,439	371,240	7,587	0
66	9/4/2023	84.7	6,584	5,940	4,323	377,200	7,776	0
67	9/4/2023	84.1	6,722	6,479	4,399	370,260	7,436	0
68	9/4/2023	80	6,107	5,890	5,214	354,920	7,376	0
69	9/4/2023	80	6,164	5,444	4,988	373,740	7,531	0
70	9/5/2023	81.6	6,429	5,704	4,948	377,000	7,506	0
71	9/5/2023	83.5	6,510	5,925	4,731	325,220	6,856	0
72	9/5/2023	85.6	6,633	6,122	4,472	373,760	7,592	0
73	9/5/2023	88.5	6,429	5,942	4,546	374,800	7,580	0
74	9/5/2023	89	6,311	5,715	5,013	371,600	7,511	0
75	9/5/2023	79	6,215	5,366	4,375	380,350	7,795	0

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Well Name: Samuel Jones BRK 10H

47009003370000

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	265.00	265.00	
Top of Salt Water	540.00	540.00	NA	NA	
Pittsburgh Coal	370.00	370.00	395.00	395.00	
Pottsville (ss)	511.00	511.00	645.00	645.00	
Raven Cliff (ss)	854.00	852.00	1117.00	1112.00	
Maxton (ss)	1216.00	1210.00	1427.00	1416.00	
Big Injun (ss)	1609.00	1596.00	1726.00	1711.00	
Rhinestreet (shale)	5598.00	5509.00	5873.00	5771.00	
Cashaqua (shale)	5873.00	5771.00	5933.00	5824.00	
Middlesex (shale)	5933.00	5824.00	6020.00	5895.00	
Tully (ls)	6046.00	5914.00	6119.00	5966.00	
Mahantango (shale)	6119.00	5966.00	6343.00	6077.00	
Marcellus (shale)	6343.00	6077.00	NA	NA	GAS

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/22/2023
Job End Date:	9/5/2023
State:	West Virginia
County:	Brooke
API Number:	47-009-00337-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	SAMUEL JONES BRK 10
Latitude:	40.19048745
Longitude:	-80.56102085
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,411
Total Base Water Volume (gal):	25,070,088
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	87.93505	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.24720	

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			Water	7732-18-5	85.00000	0.24720	
MC MX 5-3886	SWN Well Services	Biocide					
				Listed Below			
Legen LD-7750W	SWN Well Services	Scale Inhibitor					
				Listed Below			
FSTI-CI-02	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Excelerate LX-15	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			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline Silica, quartz	14808-60-7	100.00000	11.67927	
			Hydrochloric Acid	7647-01-0	15.00000	0.04096	
			Complex Amine Compound	Proprietary	50.00000	0.03194	

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			Hydrotreated light petroleum distillate	64742-47-8	25.00000	0.01597	
			Surfactant	Proprietary	5.00000	0.00319	
			Sodium Erythorbate	6381-77-7	100.00000	0.00146	
			Ethoxylated alcohols	Proprietary	1.00000	0.00064	
			Ethylene glycol	107-21-1	40.00000	0.00017	
			Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	10.00000	0.00004	
			N,N-Dimethylformamide	68-12-2	10.00000	0.00004	
			Cinnamaldehyde	104-55-2	10.00000	0.00004	
			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	
			1-Decanol	112-30-1	5.00000	0.00002	
			Isopropyl alcohol	67-63-0	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)

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