

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

API 47009003350000 County BROOKE District CROSS CREEK
Quad STEUBENVILLE EAST, OH Pad Name NICK BALLATO-BRK-PADI Field/Pool Name PANHANDLE FIELD WET
Farm Name NICHOLAS & CHRISTOPHER BALLATO Well Number NICK BALLATO 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	<u>4,462,297.78</u>	Easting	<u>536,935.43</u>
Landing Point of Curve	Northing	<u>4,462,328.62</u>	Easting	<u>537,139.64</u>
Bottom Hole	Northing	<u>4,455,525.73</u>	Easting	<u>539,655.48</u>

Elevation (ft) 958.8' 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 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 2023-05-22 Date drilling commenced 2023-06-08 Date drilling ceased 2023-06-27

Date Completion activities began 2023-07-19 Date Completion activities ceased 2023-09-21

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	<u>301'</u>	Open mine(s) (Y/N) depths	<u>N</u>
Salt water depth(s) ft	<u>790'</u>	Void(s) encountered (Y/N) depths	<u>N</u>
Coal depth(s) ft	<u>0'</u>	Cavern(s) encountered (Y/N) depth	<u>N</u>
Is coal being mined in area (Y/N)	<u>N</u>		

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APPROVED

Reviewed by: [Signature]

1/2/2024

API 47009003350000

Farm name NICHOLAS & CHRISTOPHER BALLATO

Well number NICK BALLATO 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	20.000	20.000	136	NEW	94.00	J-55		Y
Surface	17.500	13.375	353	NEW	54.50	J-55	N/A	Y 30 BBLS
Coal								
Intermediate 1	12.250	9.625	1374	NEW	36.00	J-55		Y 37 BBLS
Intermediate 2								
Intermediate 3								
Production	8.500	5.500	30189	NEW	20.00	P-110 HP		N
Tubing		3.670	5778	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	393	15.6	1.19	467.67	SURFACE	8
Coal							
Intermediate 1	CLASS A	574	15.6	1.19	683.06	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	6992	14.5	1.29	9019.68	411'	24
Tubing							

Drillers TD (ft) 30,189'

Loggers TD (ft) 30,189'

Deepest formation penetrated MARCELLUS

Plug back to (ft) 30,096'

Plug back procedure N/A

Kick off depth (ft) 4,890' 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: **16** CENTRALIZERS - EVERY THIRD JOINT OF CASING

PRODUCTION: **710** 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 _____

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API 47009003350000 Farm name NICHOLAS & CHRISTOPHER BALLATO Well number NICK BALLATO BRK 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE ATTACHMENT 1				

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
	SEE ATTACHMENT 2							

Please insert additional pages as applicable.

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**NICK BALLATO BRK 10H
ATTACHMENT 1
PERF REPORT**

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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

**NICK BALLATO 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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NICK BALLATO BRK 10H
ATTACHMENT 2
STIM REPORT

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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

**NICK BALLATO BRK 10H
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	9/2/2023	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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API 47009003350000 Farm name NICHOLAS & CHRISTOPHER BALLATO Well number NICK BALLATO BRK 10H

PRODUCING FORMATION(S)	DEPTHS	
MARCELLUS	5,467' TVD	5,739' MD

Please insert additional pages applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,471 psi Bottom Hole _____ psi DURATION OF TEST (hrs) _____

OPEN FLOW GAS 7,732 mcpd OIL 1,494 bpd NGL _____ bpd WATER 1,762 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)

SEE ATTACHMENT 3				
RECEIVED Office of Oil and Gas DEC 01 2023 WV Department of Environmental Protection				

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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

Company SWN WELL SERVICES Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Please insert additional pages as applicable.

Completed by CAROL A. PRUITT Telephone 832-796-3007
 Signature  Title SR. REGULATORY SPECIALIST Date 11/29/2023



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Well Name: NICK BALLATO BRK 10H

47009003350000

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	301.00	301.00	
Top of Salt Water	790.00	790.00	NA	NA	
Pittsburgh Coal	NA	NA	NA	NA	
Ravencliff (ss)	510.00	510.00	738.00	737.00	
Maxton (ss)	811.00	811.00	973.00	973.00	
Big Injun (ss)	1090.00	1090.00	1258.00	1257.00	
Berea (siltstone)	1528.00	1525.00	2013.00	2001.00	
Rhinestreet (shale)	5101.00	4975.00	5348.00	5207.00	
Cashaqua (shale)	5348.00	5207.00	5508.00	5335.00	
Tully (ls)	5508.00	5335.00	5589.00	5390.00	
Mahantango (shale)	5589.00	5390.00	5739.00	5467.00	
Marcellus (shale)	5739.00	5467.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/20/2023
Job End Date:	8/14/2023
State:	West Virginia
County:	Brooke
API Number:	47-009-00335-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	NICK BALLATO BRK 10
Latitude:	40.31040532
Longitude:	-80.56530507
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,764
Total Base Water Volume (gal):	39,234,412
Total Base Non Water Volume:	0

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Base Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	88.37404	Density = 8.345
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.30208	

			Water	7732-18-5	85.00000	0.30208	
HCL	SWN Well Services	Solvent					
				Listed Below			
Ferriplex 80	SWN Well Services	Iron Control					
				Listed Below			
FSTI-CI-02	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Legen LD-7750W	SWN Well Services	Scale Inhibitor					
				Listed Below			
Excelerate LX-15	SWN Well Services	Friction Reducer					
				Listed Below			
MC MX 5-3886	SWN Well Services	Biocide					
				Listed Below			
Sand	SWN Well Services	Proppant					
				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	11.17533	
			Hydrochloric Acid	7647-01-0	15.00000	0.05061	
			Complex Amine Compound	Proprietary	50.00000	0.03199	

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			Hydrotreated light petroleum distillate	64742-47-8	25.00000	0.01599	
			Surfactant	Proprietary	5.00000	0.00320	
			Sodium Erythorbate	6381-77-7	100.00000	0.00180	
			Ethoxylated alcohols	Proprietary	1.00000	0.00064	
			Ethylene glycol	107-21-1	40.00000	0.00021	
			Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy-	9016-45-9	10.00000	0.00005	
			N,N-Dimethylformamide	68-12-2	10.00000	0.00005	
			Cinnamaldehyde	104-55-2	10.00000	0.00005	
			Triethyl phosphate	78-40-0	5.00000	0.00003	
			benzyl chloridequaternized	72480-70-7	5.00000	0.00003	
			Isopropyl alcohol	67-63-0	5.00000	0.00003	
			1-Octanol	111-87-5	5.00000	0.00003	
			1-Decanol	112-30-1	5.00000	0.00003	
			2-Butoxyethanol	111-76-2	5.00000	0.00003	

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- * Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
- ** Information is based on the maximum potential for concentration and thus the total may be over 100%
- *** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)