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

API <u>47</u> - 009 _	00202	County BROOKE		Di	strict B	UFFALO)			
ouad BETHANY & TIL	TONSVILLE	Pad Name MIKE R	YNIAWEC BF	K PAD Fi	eld/Poo	Name F	PANHAND	LE FIE	LD WET	
arm name MIKE RYNIA	WEC			v	ell Nun	nber MI	KE RYN	IIAWE	C BRK 20)1H
Operator (as registered wit	h the OOG)	SWN PRODUCTIO	N COMPAN							
Address PO BOX 1235	9	City SPR	ING		State	TX		Zip 7	7391-23	59
Top Landing Point of Bottom Elevation (ft) 1147.4 Permit Type Deviate Type of Operation Con Well Type Brine Dispo	Curve N Hole N GL ed □ Hor vert □ De sal □ CBM ngle □ Mult Rotary	■ Gas □ Oil □ Seconiple Fluids Produce □ Mud ■Fresh Wate	New □ Exis al 6A □ Vo Plug Back ondary Recove ed □ Brine	Easting Easting ting ertical Redrilli ry Solu Gas	g 533256 g 532768 g 531487 Type Deping □	of Reporth Type Rework ning S	□ D Storage □ Otl	Deep imulat Other	■ Shale	
Mud Type(s) and Additiv	e(s)									_
Date permit issued9	/1/2017	Date drilling comm	enced2/	6/2018	Da	ite drilling	g ceased		3/6/2018	3
Date completion activities	began	6/15/2018	Date comple	tion activi	ties ceas	sed	7/23/			
Verbal plugging (Y/N)	N D	ate permission granted	N/A		Granto	ed by		N/A		- 1
Please note: Operator is r	equired to sub	omit a plugging applica	tion within 5 o	lays of ver	bal perr	nission to	plug		Office of	Oil and
reshwater depth(s) ft _		346	Open mine(s)	(Y/N) dej	oths		1	N	WV Der Environme	artmer
Salt water depth(s) ft	6	45	Void(s) enco	intered (Y	/N) dep	ths		14		ital Pro
Coal depth(s) ft	34	2	Cavern(s) end	epths	s N					
Is coal being mined in are	a (Y/N)	N						Review	wed by:	

WK-35 Rev. 8/23/13								Page _	of <u>7</u>
API 47- 009	00202	Farm name_	MIKE RYNIA	WEC		We	ell number_MIK	E RYNIAWEC I	3RK 201H
CASING STRINGS	Hole Size	Casing Size		ew or Jsed	Grade wt/ft		Basket Depth(s)	Did cement circula * Provide details	, ,
Conductor	24	20		NEW		5/94#	Дерика)	Y	ociow
Surface	17.5	13.375		NEW		/54.50#	252.3', 320.6'	Y, 43	
Coal	SEE SURFACE		125				202.0, 020.0	., .,	
Intermediate 1	12.25	9.625	1697 N	VEW	J-5	5/36#		Y, 30	
Intermediate 2		0.020	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			<u> </u>			
Intermediate 3									-
Production	8.75/8.50	5.5 1	6600	NEW	HCP-	110/20#		Y	
Tubing				NEW	P-10	00/4.7#		N	
Packer type and d	epth set								
CEMENT	Class/Type	Number	Slurry		ield	Volume	e Ceme	nt 11	/oc
DATA	of Cement	of Sacks	wt (ppg)		3/sks)	(U)			hrs)
Conductor	CLASS A	GROUT TO SURFACE					SURFA	CE	24
Surface	CLASS A	201	15.60	1	.20	241.2	SURFA	CE	8
Coal	SEE SURFAC	E							
Intermediate 1	CLASS A	656	15.60	1	.20	787.2	SURFA	CE	8
Intermediate 2				↓					
Intermediate 3 Production			15.55	 			CUDE/	105	
Tubing	CLASS A	2,869	15.60	1 1	.19	3,414.1	11 SURFA	ACE	24
Drillers TD (fi Deepest forma Plug back pro	tion penetrated	MARCELLUS			D (ft) 166 to (ft) N/				
Kick off depth		•		- deviate gamma	ed/directi a ray		induction I temperature	□sonic	
Well cored	⊐Yes ■ No	Conventional	Sidewall		W	ere cuttin	gs collected	Yes ■ No	
DESCRIBE T	HE CENTRALI	ZER PLACEMENT	USED FOR E	ACH C	ASING S	TRING _			
	RALIZERS - EVERY THIR								
		RY THIRD JOINT OF CASING RY THIRD JOINT FROM SURFA	CE TO TOP OF CURV	/E, THEN E	VERY JOINT	UNTIL TD		95/	CEIVED
		AS SHOT HOLE			-			Office of	Oil and Gas 1 9 2018
WAS WELL	COMPLETED C	PEN HOLE? - Y	es 🖪 No	DET	AILS _			WV De Environme	partment of intal Protection

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

API 47- 009 - 00202 Farm name MIKE RYNIAWEC Well number MIKE RYNIAW	EC BRK 201
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PERFORATION RECORD

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

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 Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	ATTACHMENT					
				-	•	_		
				. —				
			 					
-								RECEIVED Office of Oil and Gas
								OCT 1 9 2018
								WAY Department of
								WV Department of Environmental Protect

Please insert additional pages as applicable.

API 47- 009 - 00202		Farm	Farm name MIKE RYNIAWEC					_Well number_MIKE RYNIAWEC BRK 201H			
PRODUCING	FORMATION	(S)	DEPTHS								
MARCELLUS			5,899	_TVD	6,416	MD					
		_ ,									
Please insert ad	ditional pages	as applicable.									
GAS TEST	□ Build up	□ Drawdown	□ Open Flow		OIL TEST	Flow E	Pump				
SHUT-IN PRE	SSURE Sur	rface 2568	_psi Botto	m Hole	psi	DURA'	TION C	F TEST	·	hrs	
OPEN FLOW	Gas 1,485 mc	Oil efpd 312	NGL bpd	bpd	Water 545 bpd	GAS N □ Estir	/IEASU nated	RED B	Y ice t	Pilot	
LITHOLOGY/ FORMATION	TOP DEPTH IN FT	DEPTH IN FT	TOP DEPTH IN FT		FT DESCRIBE						
	NAME TVD 0	TVD	MD 0	MD	TYPE OF F	LUID (FRE	SHWAL	ER, BRID	E, OIL.	GAS, H ₂ S, ETC)	
	SEE	ATTACHMENT	3								
					-						
					T I						
										-	
Please insert ac	ditional pages	as applicable.									
		LLING COMPAN	IY								
Address PO BO			City	SPRING		State	TX	Zip	77391-2	2359	
Logging Comp	any WEATHER	RFORD									
Address 2000 S	T. JAMES PLACE	E	City	HOUSTON	N	State	TX	Zip	77056		
Cementing Cor	npany SCHLU	MBERGER WEL	L SERVICES								
Address 1080 U	S-33		City	WESTON		State	WV	Zip	26452		
Stimulating Co		IBURTON ENER		IAME I EX	7		NAM /	145	26270	RECEIVED Office of Oil and Ga	
Address 1628 J Please insert ac			City	JANE LEV	V	State	WV	Zip_	26378	OCT 1 9 2018	
	1	10			227	000 75				001 1 9 2010	
Completed by	BUBBY WILL	iś ()	Title P	EGUI ATOR	Telephon	832-796	Data 1	0/18/201	8	WV Department of Environmental Protect	
SignatureSubmittal of H	ydraulic Fractu	ring Chemical I			Attach copy		Date 1	0/18/201 Registr		Environmental Prof	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/16/2018
Job End Date:	7/14/2018
State:	West Virginia
County:	Brooke
API Number:	47-009-00202-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Mike Ryniawec 201H
Latitude:	40.19069135
Longitude:	-80.60930473
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,851
Total Base Water Volume (gal):	12,652,075
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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	82.89859	Density = 8.340
Ingredients	Listed Above	Listed Above					
		RECEIVITICE of OIL OCT 19 W Departremental	Water	7732-18-5	100.00000	1.40697	

HYDROCHLORI C ACID	Halliburton	Solvent					
				Listed Below			
SCAL16486A	NALCO	Scale Inhibitor					
				Listed Below			
SAND- PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			
EXCELERATE LX-1	Halliburton	Friction Reducer					
				Listed Below			
BIOC11219A	NALCO	Biocide					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
Items above are Tra	ade Names with t	he exception of Base Wa	ater . Items below are the ind				
			Crystalline silica, quartz	14808-60-7	100.00000	15.63819	
			Hydrochloric acid	7647-01-0	15.00000	0.20459	

Polyacrylate	Proprietary	30.00000	0.02153	
Hydroteated light petroleum distillate	64742-47-8	30.00000	0.02153	
Fatty acid ester	Proprietary	5.00000	0.00718	
Amine Triphosphate	Proprietary	30.00000	0.00648	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
Ethylene Glycol	107-21-1	30.00000	0.00648	
Ammonium chloride	12125-02-9	5.00000	0.00359	
Ethoxyalted fatty acid	Proprietary	5.00000	0.00359	
Sodium chloride	7647-14-5	5.00000	0.00359	
Methanol	67-56-1	60.00000	0.00293	
Benzyl-(C12-C16 Alkyl)- Dimenthyl-Ammonium Chloride	68424-85-1	30.00000	0.00147	
Non-hazardous food substance	Proprietary	100.00000	0.00104	
Glutaraldehyde	111-30-8	10.00000	0.00049	

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

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)

^{**} 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

MIKE RYNIAWEC BRK 201H ATTACHMENT 1 PERF REPORT

Can a series	PERFICEORI					
			Perf Bottom MD	# SHOTS PER STG		
1	5/24/2018	16,508	16,415	36		
2	6/16/2018	16,380	16,273			
3	6/16/2018	16,240	16,133			
4	6/17/2018	16,100	15,993	42		
5	6/18/2018	15,960	15,853	42		
6	6/18/2018	15,820	15,713	42		
7	6/18/2018	15,680	15,573	42		
8	6/19/2018	15,540	15,433	42		
9	6/19/2018	15,403	15,293	42		
10	6/20/2018	15,260	15,153	42		
11	6/20/2018	15,120	15,013	42		
12	6/20/2018	14,980	14,873	42		
13	6/21/2018	14,840	14,733	42		
14	6/21/2018	14,700	14,593	42		
15	6/22/2018	14,560	14,453	42		
16	6/22/2018	14,420	14,313	42		
17	6/23/2018	14,280	14,178	42		
18	6/23/2018	14,140	14,033	42		
19	6/23/2018	14,000	13,893	42		
20	6/23/2018	13,860	13,753	42		
21	6/24/2018	13,720	13,613			
22	6/24/2018	13,580	13,473			
23	6/24/2018	13,440	13,333			
24	6/25/2018	13,300	13,193			
25	6/25/2018	13,160	13,053			
26	6/25/2018	13,022	12,913			
27	6/26/2018	12,880	12,775			
28	6/26/2018	12,740	12,633			
29	6/26/2018	12,600	12,493			
30	6/27/2018	12,460	12,353			
31	6/28/2018	12,320	12,213			
32	6/28/2018	12,180	12,073			
33	6/29/2018	12,040	11,933			
34	6/29/2018	11,900	11,793			
35	6/30/2018	11,760	11,653			
36	6/30/2018	11,620	11,513			
37	6/30/2018	11,480	11,373			
38	7/1/2018	11,340	11,233			
39	7/1/2018	11,200	11,093			
40	7/1/2018	11,060	10,953			
41	7/1/2018	10,920	10,813			
42	7/2/2018	10,780	10,673			
43	7/2/2018	10,640	10,533			

MIKE RYNIAWEC BRK 201H ATTACHMENT 1 PERF REPORT

	PERF REPORT								
STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG					
44	7/3/2018	10,500	10,393	42					
45	7/3/2018	10,360	10,253	42					
46	7/4/2018	10,220	10,113	42					
47	7/4/2018	10,080	9,973	42					
48	7/4/2018	9,940	9,833	42					
49	7/5/2018	9,800	9,693	42					
50	7/5/2018	9,660	9,553	42					
51	7/6/2018	9,520	9,413	42					
52	7/6/2018	9,380	9,273	42					
53	7/7/2018	9,240	9,133	42					
54	7/7/2018	9,100	8,993	42					
55	7/8/2018	8,960	8,853	42					
56	7/8/2018	8,820	8,713	42					
57	7/8/2018	8,680	8,573	42					
58	7/9/2018	8,540	8,433	42					
59	7/9/2018	8,400	8,293	42					
60	7/10/2018	8,260	8,153	42					
61	7/10/2018	8,120	8,013	42					
62	7/10/2018	7,980	7,873	42					
63	7/10/2018	7,840	7,733	42					
64	7/11/2018	7,700	7,593	42					
65	7/11/2018	7,560	7,453	42					

Office of Oil and Gas

OCT 19 2018

W Department of Environmental Protection

MIKE RYNIAWEC BRK 201H ATTACHMENT 2 STIM REPORT

		Aug Burns	Avio	STIM REPORT		A-moviet of	Amount of	Amount of
TAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of	Amount of nitrogen/othe
	6/16/2018		Treatment 7,694				171,477,771	
2				7,973	3,645		17 75 6	
	6/16/2018			5,621	3,770			
3	6/17/2018				3,816			
4	6/17/2018				4,086		The Assets of	
5	6/17/2018				4,004			
6	6/18/2018				4,156			
7	6/19/2018				3,944			
8	6/19/2018				4,211	271,700		
9	6/19/2018				3,925			
10	6/20/2018				3,901	289,460		
11	6/20/2018				3,952			
12	6/21/2018				4,037			
13	6/21/2018				4,122			
14	6/21/2018				4,377			
15	6/22/2018				4,240			
16	6/22/2018				4,231			
17	6/23/2018				4,069			
18	6/23/2018				3,946		THE PARTY OF THE P	
19	6/23/2018				4,277			
20	6/24/2018				4,442	288,840		
21	6/24/2018			5,455	4,250	269,460	4,488	
22	6/24/2018	100			4,037	286,810	4,121	
23	6/25/2018	100	7,650	5,547	4,409	288,770	3,708	0
24	6/25/2018	100	7,221	5,319	4,365	273,400	4,782	0
25	6/25/2018	100	7,476	4,460	4,302	277,180	4,292	0
26	6/26/2018	100	7,383	5,633	4,058	273,840	3,639	0
27	6/26/2018	96	7,843	5,048	4,047	269,380	4,116	0
28	6/26/2018	98	7,569	4,062	4,128	283,470	4,057	0
29	6/27/2018	98	7,613	8,243	4,063	284,730	4,044	0
30	6/27/2018	98.2	7,676	5,794	4,396	281,520	3,914	0
31	6/28/2018	92.3	7,584	5,846	4,191	288,180	4,630	0
32	6/29/2018	89.8	7,858	5,927	4,085	287,605	4,293	
33	6/29/2018	100	7,134	5,151	4,121	282,210	4,230	0
34	6/29/2018	99.9	7,276	5,908	4,179			
35	6/30/2018	98.9	7,117	5,790	4,322			
36	6/30/2018	99.8	7,146	5,476	4,476	283,430	3,520	0
37	7/1/2018	99.4			4,586			
38	7/1/2018	100.2			4,515			
39	7/1/2018	97.7			4,141	285,960		
40	7/1/2018	99.1			4,434			
41	7/2/2018	99.6			4,635			
42	7/2/2018	98.4	7,047		4,274			
43	7/3/2018				4,135			
44	7/3/2018	100.5			4,319		A 10000	
45	7/3/2018				4,778			
46	7/4/2018				4,375		- B. VIV.	
47	7/4/2018				4,186	2117.75		
48	7/5/2018				9,570			
49	7/5/2018				4,471			
50	7/6/2018				3,969		8,350	
51	7/6/2018			5,668	4,140		4,762	
52	7/7/2018				4,354		4,299	
53	7/7/2018			5,566	4,543		4,317	

MIKE RYNIAWEC BRK 201H ATTACHMENT 2 STIM REPORT

				JIM KEFOKI		-	The second secon	All the same of th
		Ave Pump	Ave	Max		Amount of	Amount of	Amount of
Stim I	Date	Rate (BPM)	Treatment	Breakdown	ISIP (PSI)	Proppant (lbs)	water bbls	nitrogen/othe
4 7/	7/2018	98.9	6,728	5,845	4,419	283,660	3,876	0
5 7/	8/2018	99.5	6,706	6,464	4,102	282,960	4,429	0
6 7/	8/2018	100.7	6,608	6,408	4,045	284,320	4,066	0
7 7/	8/2018	99.5	6,636	6,356	4,283	285,340	3,740	0
8 7/	9/2018	99.5	6,781	6,219	4,453	284,100	3,665	0
9 7/	9/2018	100.5	6,712	5,937	4,332	288,600	3,873	0
0 7/1	0/2018	100.4	6,424	6,004	4,481	291,390	3,608	0
7/1	0/2018	99.9	6,853	5,728	4,242	287,120	3,933	0
2 7/1	0/2018	99.9	6,757	5,726	4,482	287,120	3,709	0
3 7/1	0/2018	99.3	6,461	5,573	4,629	286,980	3,543	0
64 7/1	1/2018	100.3	6,444	5,736	4,343	274,470	3,975	0
5 7/1	1/2018	100	6,615	5,484	4,179	286,690	3,589	0
	4 7// 55 7// 66 7// 77 7// 88 7// 99 7// 100 7/1 11 7/1 12 7/1 13 7/1 14 7/1	5 7/8/2018 6 7/8/2018 7 7/8/2018 8 7/9/2018 9 7/9/2018 0 7/10/2018 1 7/10/2018 2 7/10/2018 3 7/10/2018 4 7/11/2018	4 7/7/2018 98.9 5 7/8/2018 99.5 6 7/8/2018 100.7 7 7/8/2018 99.5 8 7/9/2018 99.5 9 7/9/2018 100.5 10 7/10/2018 100.4 11 7/10/2018 99.9 12 7/10/2018 99.9 13 7/10/2018 99.3 14 7/11/2018 100.3	Stim Date Rate (BPM) Treatment 4 7/7/2018 98.9 6,728 5 7/8/2018 99.5 6,706 6 7/8/2018 100.7 6,608 7 7/8/2018 99.5 6,636 8 7/9/2018 99.5 6,781 9 7/9/2018 100.5 6,712 0 7/10/2018 100.4 6,424 1 7/10/2018 99.9 6,853 2 7/10/2018 99.9 6,757 3 7/10/2018 99.3 6,461 4 7/11/2018 100.3 6,444	Stim Date Rate (BPM) Treatment Breakdown 4 7/7/2018 98.9 6,728 5,845 5 7/8/2018 99.5 6,706 6,464 6 7/8/2018 100.7 6,608 6,408 7 7/8/2018 99.5 6,636 6,356 8 7/9/2018 99.5 6,781 6,219 9 7/9/2018 100.5 6,712 5,937 10 7/10/2018 100.4 6,424 6,004 11 7/10/2018 99.9 6,853 5,728 12 7/10/2018 99.9 6,757 5,726 13 7/10/2018 99.3 6,461 5,573 14 7/11/2018 100.3 6,444 5,736	Stim Date Rate (BPM) Treatment Breakdown ISIP (PSI) 4 7/7/2018 98.9 6,728 5,845 4,419 5 7/8/2018 99.5 6,706 6,464 4,102 6 7/8/2018 100.7 6,608 6,408 4,045 7 7/8/2018 99.5 6,636 6,356 4,283 8 7/9/2018 99.5 6,781 6,219 4,453 9 7/9/2018 100.5 6,712 5,937 4,332 0 7/10/2018 100.4 6,424 6,004 4,481 1 7/10/2018 99.9 6,853 5,728 4,242 2 7/10/2018 99.9 6,757 5,726 4,482 3 7/10/2018 99.3 6,461 5,573 4,629 4 7/11/2018 100.3 6,444 5,736 4,343	Stim Date Rate (BPM) Treatment Breakdown ISIP (PSI) Proppant (lbs) 4 7/7/2018 98.9 6,728 5,845 4,419 283,660 5 7/8/2018 99.5 6,706 6,464 4,102 282,960 6 7/8/2018 100.7 6,608 6,408 4,045 284,320 7 7/8/2018 99.5 6,636 6,356 4,283 285,340 8 7/9/2018 99.5 6,781 6,219 4,453 284,100 9 7/9/2018 100.5 6,712 5,937 4,332 288,600 0 7/10/2018 100.4 6,424 6,004 4,481 291,390 1 7/10/2018 99.9 6,853 5,728 4,242 287,120 2 7/10/2018 99.9 6,757 5,726 4,482 287,120 3 7/10/2018 99.3 6,461 5,573 4,629 286,980 4 7/11/2018	Stim Date Rate (BPM) Treatment Breakdown ISIP (PSI) Proppant (Ibs) water bbls 4 7/7/2018 98.9 6,728 5,845 4,419 283,660 3,876 5 7/8/2018 99.5 6,706 6,464 4,102 282,960 4,429 6 7/8/2018 100.7 6,608 6,408 4,045 284,320 4,066 7 7/8/2018 99.5 6,636 6,356 4,283 285,340 3,740 8 7/9/2018 99.5 6,781 6,219 4,453 284,100 3,665 9 7/9/2018 100.5 6,712 5,937 4,332 288,600 3,873 0 7/10/2018 100.4 6,424 6,004 4,481 291,390 3,608 1 7/10/2018 99.9 6,853 5,728 4,242 287,120 3,933 2 7/10/2018 99.9 6,757 5,726 4,482 287,120 3,709

Office of Oil and Gas

OCT 19 2018

WV Department of Environmental Protection

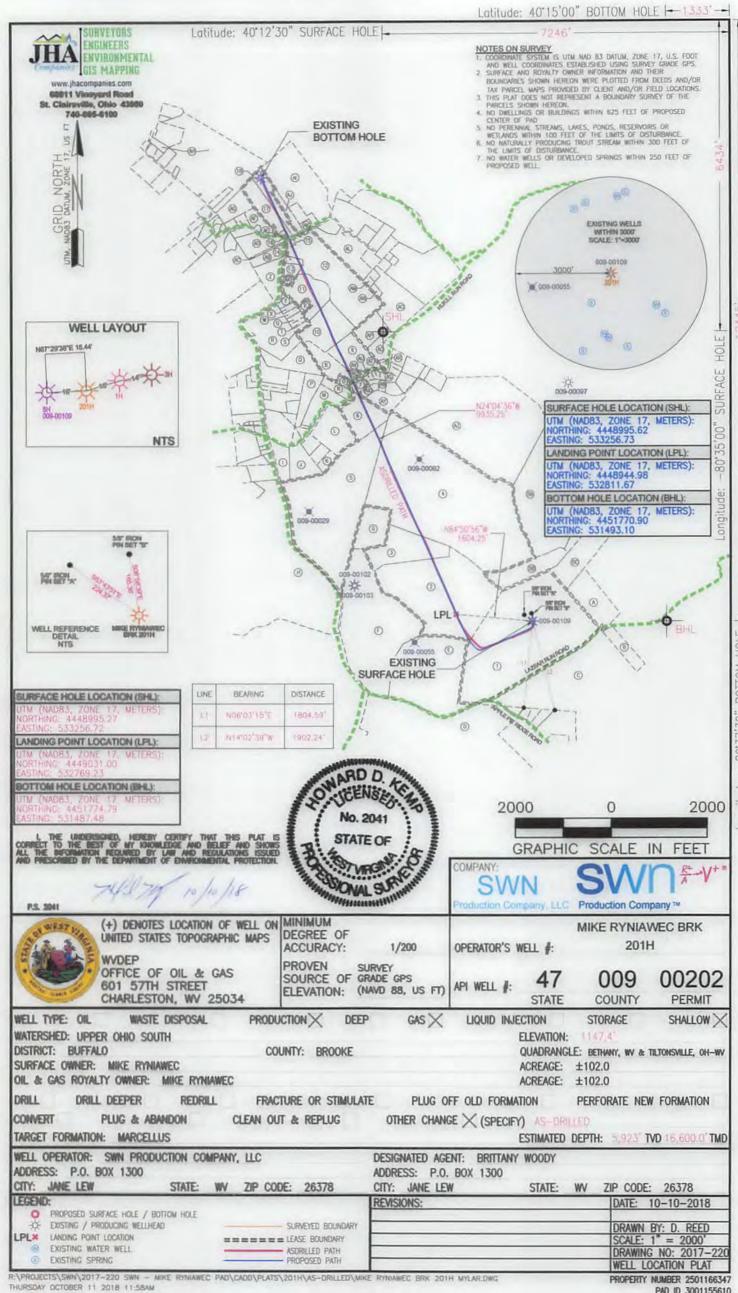


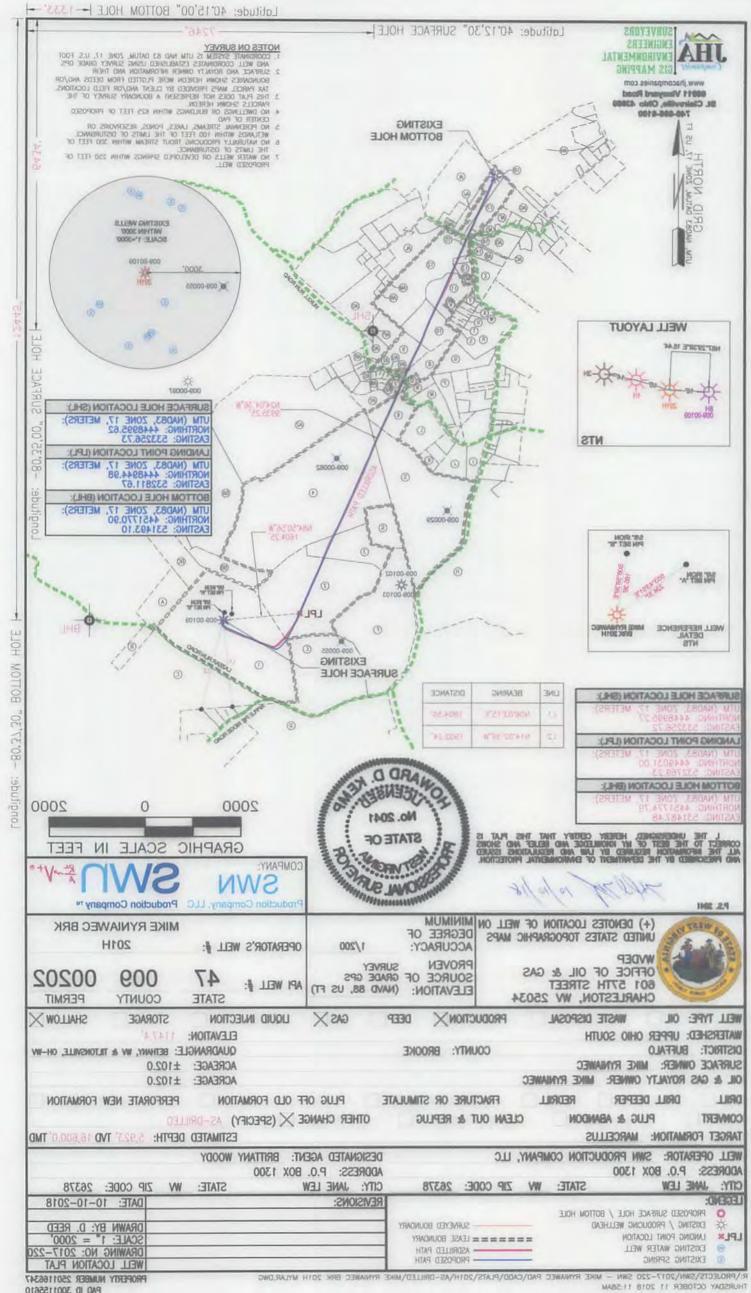
Well Name: MIKE RYNIAWEC BRK 201H

47009002020000

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	346.00	346.00	
Top of Salt Water	645.00	645.00	NA	NA	
Pittsburgh Coal	342.00	342.00	348.00	348.00	
Big Injun (ss)	1505.00	1505.00	1933.00	1933.00	
Berea (siltstone)	1933.00	1933.00	5402.00	5402.00	
Rhinestreet (shale)	5402.00	5402.00	5759.00	5544.00	
Cashaqua (shale)	5848.00	5615.00	5917.00	5665.00	
Middlesex (shale)	5917.00	5665.00	6016.00	5730.00	
Burket (shale)	6016.00	5730.00	6037.00	5743.00	
Tully (Is)	6037.00	5743.00	6132.00	5797.00	
Mahantango (shale)	6132.00	5797.00	6416.00	5899.00	
Marcellus (shale)	6416.00	5899.00	NA	NA	GAS







	WELL BORE TABLE FOR SURFACE / ROYALT	Y OWNERS	
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	RYMAWEC MIKE (S)/(R)	03-B42-0033,0000	102.00
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	LLITHER GRIZZEL	03-642-0029.0000	79,13
3	LUTHER GRIZZEL	03-842-0031 0000	18.57
4	HENRY HEINZROTH	03~B42~0032.0000	140.52
5	JAY GLEN COLLINS	03-841-0080.0000	291.95
6	FRANK G. AINSCOUGH & KELLY L. AINSCOUGH JTROS	03-842-0071,0000	12.55
7	MICHAEL ENSMINGER	03-B42-0009.0000	1.89
8	BARBARA C. MCFARLAND	03-842-0007:0000	6.09
9	ROD EDWARD PATTISON JR.	03-842-0004.0000	13.25
10	ROGER L. SNODERLY & KAREN A SNODERLY (SURV.)	03-B41-0106.0000	14.58
11	CHRISTOPHER S LOY & INGRID E. LOY (SURV.)	03-836-0119.0000	13.80
12	DALE V HOPKINS	03-836-0124-0000	34.11
13	VIRGINIA MAY HUNT FORKER	03-B36-0121.0000	2,00
14	HOWARD M. ROCKHOLD & DEBROAH S. ROCKHOLD (SURV.)	03-H36-0122 0000	1.17
15	JOSEPH P. LIZON JR.	03-H36-0123,0000	0.53
16	CHAPEL HILL CHURCH	03-B36-0131.0000	1,10
17	RICKEY E. FIBER	0.5-836-0132,0000	8.47
18	LORIE T. DONNELLY & MICHAEL A. HOIT (SURV.)	0.5-836-0130.0000	5.75
			4

TRACT	ADJOINING OWNERS TABLE SURFACE OWNER	TAX PARCEL	ACRES
A	RALPH O. SMITH & CINA L. SMITH (SLERV.)	0.3-842-0064.0000	12.60
В	DOUGLAS L. TURNER & BELINDA TURNER	03-842-0035,0000	5.00
C	MIKE RYNIAWED	0.3-B42-0034.0000	61.17
D	JOSEPH S BUREK & JANE M. BUREK	03-847-0019.0000	117.88
E	ELIZABETH ELLEN FELIHARTY	03-847-0018.0000	52.00
F	KATHY LYNN MAYHEW & MICHAEL ET AL (SURV.)	03-B47-0027.0000	79.13
C	LUTHER CRIZZEL	03-842-0030.0000	10.48
H	JAY CLEN COLLINS	03-B41-0080,0000	291.95
1	SHAWN M. SINES	03-841-0085.0000	5.61
2	HENRY MIKELS; BONNIE J BURKETT (SURV.)	03-841-0086.0001	7.72
k	JASON D. WHITE & MARY E. WHITE (SURV.)	03-941-0086-0000	2.32
L	ROBERT D. HILDEBRAND II & LESUE C. HILDEBRAND (SURV.)	03-842-0063.0000	14.07
M	ALIDRA EDWARD REFFITT & JANE BEATICE (SURV.)	03-B41-0118-0002	8.00
N.	MICHAEL TODO ELLIOTT & YOLAHDA S. ELLIOTT (SURV.)	03-842-0062 0000	4.55
0	BARBARA C. MCFARLAND	03-842-0008.0000	1.00
Р	JOAN C. ARACICH (TOD)	03-841-0119.0000	6.02
0	KADESH CHAPEL CEMETARY	03-841-0107.0000	9:18
H	LORETTA JOAN BASIL	03-841-0099.0000	53.00
5	JERONY R. SADLER	03-841-0105-0000	0.90
T	WAYNE J. SMITH & KASSI JO SMITH (SURV.)	03-841-0104.0000	0.87
U	MAYNE J. SMITH & KASSI JO SMITH (SURV.)	03-841-0103.0000	1.00
V	THOMAS L PUSKARICH & KIMBERLY PUSKARICH (SURV.)	03-B41-0121.0000	1.00
W	WILLIAM J. COCHRAN & SANDRA L. COCHRAN (SURV.)	03-841-0102-0000	1.00
K	ERVAN R. COWAN, RICHARD; DIANE DIGHT, JODY TENNANT	03-B41-0101.0000	1,00
Y	JOHN GEORGE SR. & MAKINE GEORGE	03-841-0100.0000	1.20
2	MARK LLOYD VANHORN & JOANN VANHORN (SURV.)	03-836-0118.0000	7.65
AA	CHARLES N. MONROE & CAY R. MONROE (SURV.)	0.5-B36-0120.0000	1.00
AB	JEFFREY ALAN FERRY ETAL	03-836-0117,0000	4.04
AC	DONNA HARMS ETAL	03-836-0116.0000	0.49
AD	DONNA HARMS ETAL	03-836-0115.0000	6.06
AE	MERRY M. FIBER	03-836-0133.0000	0.43
AF	JEROME ANDERSON & CATHY ANDERSON	05-836-0134.0000	4.37
AG	MARK A. ADAMS & MELODY J. ADAMS	05-836-0142.0000	6.21
AH	BRIAN L TESLOVICH	03-836-0145.0000	50.91
A	HERBERT G. WEAVER JR. & ANITA H. WEAVER (SURV.)	03-B36-0125.0000	29.47
A	DAVID LEE IZSO, ELIZABETH JANE	03-B36-0129 0000	3.00
AK	COLIN P. KELLEY II; NANCY E. TAYLOR (SURV.)	03-836-0127.0000	101
AL	DALE V. HOPKINS & DANA M. HOPKINS (SURV.)	03-837-0119.0000	23.62
AM	DIANNA ARACICH	03-837-0127.0000	1.00
AN	MICHAEL OWEN MATHESS	03-B37-0125.0000	1.14
AC	SAMUEL M HALL	03-842-0001.0000	18.12
AP	ROD EDWARD PATTISON JR.	03-942-0002-0000	6.08
AQ	DANIEL R. GORBY	03-842-0003.0000	5.00
AR	DUANE D. MILLER & BETTY J. MILLER	03-B42-0005.0000	0.73
AS.	NORTHERN HANCOCK BANK & TRUST COMPANY	03-B42-0023.0000	1.10
AT	JOHN DAVIS	03-842-0022.0000	0.64
AU	JOHN FREDERICK DAVIS	03-842-0021.0000	0.62
AV	JOHN PAUGH	03-942-0006.0000	0.92
AW	PICKEY D. CONLEY IR.	03-842-0012,0000	1.33
AX	ANDREW J. VARGO JR. & NANCY L. VARGO	03-842-0010.0000	0.85
AY	RICHARD HAROLD KENNY & JOY LYNN KENNY (SURV.)	0.3-842-0020.0000	4.51
BA	ROCCO BASIL	03-842-0019,0000	100.05
	PHYLIS P. MARKER JAMES L. BONAR ETAL.	03-842-0052.0000 03-842-0054.0000	91.51
BB	WINDSOR POWER HOUSE COAL CO.	03-842-0055.0000	21.00

REVISIONS:	COMPANY:	SWN Production Company, LLC		SWN A-V+** Production Company TM
	OPERATOR'S WELL #:	MIKE RYNI/ 20	Marca - carriery	DATE: 10-10-2018 DRAWN BY: D. REED
	DISTRICT: BUFFALO	COUNTY: BROOKE	STATE: WV	SCALE: N/A DRAWING NO: 2017-220 WELL LOCATION PLAT

SVI A-V+*		SWN reduction Company, LLC	COMPANY:	REVISIONS:
DATE: 10-10-2018 DRAWN BY: D, REED		MIKE RYNIA 201	OPERATOR'S WELL #:	
SCALE: N/A DRAWING NO: 2017-220 WELL LOCATION PLAT	STATE: WV	COUNTY: BROOKE	DISTRICT: BUFFALO	

0.53	03-836-0123.0000	JOSEPH P. 1120N JR.	dt
01.1	03-836-0131.0000	CHAPEL HILL CHURCH	ai
8.47	03-836-0132 0000	RICKEY E FEIER	17
5.75	03-836-0130.0000	LOREL 1 DONNELLY & MICHAEL A. HOLL (SURV.)	
EVE	WARESCITE BEEF CO	(NAME) OTHER WITHOUT A STITLEMENT A STATE	Bit
-		ADJOINING OWNERS TABLE	Turant and
ACRES	TAX PARCEL	SURFACE OWNER	TRACT
12.60	03-B42-0064.0000	RALPH O. SMITH & DINA L. SMITH (SURV.)	A
5.00	03-842-0035.0000	DOUGLAS L. TURNER & BELINDA TURNER	8
41.19	03-842-0034.0000	MINC BUNNAMEC	2
117.68	03-847-0019.0000	JOSEPH S. BURRER & JAME M. BURRER	- CI
52.00	0.3-847-0018.0000	LITSWALTH EITEN ELUHASTA	3
79.13	03-847-0027.0000	KATHY LYNN MAYHEW & MICHAEL ET AL (SURK.)	7
84.01	03-842-0030.0000	LUDHER GRIZZEL	3
291.95	03-841-0080.0000	JAY GLEN COLLINS	H
5.61	03-841-0085,0000	23M2 M HWAH2	
7.72	03-841-0086.0001	HENRY MIKELS; BONNIE J. BURKETT (SURV.)	L
2.32	03-841-0086.0000	JASON II WHITE & MARY E WHITE (SURV.)	N N
14.07	83-842-0063.0000	ROBLET D. HILDEBRAND II & LESUE C. HILDEBRAND (SURV.)	1
8.00	03-B41-0118,0002	AUDRA (DWARD RITTITI & JANE BEADER (SURV.)	W
4.55	03-842-0062 0000	MICHAEL TODO ELLIGIT & YOLANDA S. ELLIGIT (SURV.)	34
100.1	03-842-0008.0000	BARBARA C MOFARLAND	0
6.02	03-B41-0119,0000	JOHN C MARIEH (100)	9
81.8	03-841-0107.0000	KADESH CHAPEL CEMETARY	· p
53.00	03-841-0099.0000	LORETTA JOAN BASIL	В
0.90	03-841-0105.0000	HEROMY R. SADLER	5
78.0	03-841-0104-0000	MATHE J SMITH & HASSI JO SMITH (SURV.)	1
00:1	03-841-0103.0000	MAYNE I SMITH & KASSI JO SMITH (SURV.)	-13
00.1	03-841-0121.0000	THOMAS IL PUSIGARCH & XIMBERLY PUSIGARICH (SURV.)	V
1.00	03-B41-0102.0000	WILLIAM I COCHRAN & SANDRA L COCHRAN (SURV.)	W
00.1	03-841-0101.0000	ERVAN R. COWAN; RICHARD; DIANE BIGHT, JODY TENNANT	×
120	03-841-0100.0000	JOHN GEORGE SR. & MAXINE GEORGE	Y
7.65	03-836-0118.0000	MARK LLOYD VANHORN & JOANN WARRORN (SURV.)	5
00.1	03-836-0120.0000	CHARLES H. MICHROE & GAY R. MONROE (SURV.)	- AA
4.04	03-836-0117,0000	JEFFREY ALAN FERREY ETAL	BA:
0.49	03-836-0116.0000	DONNA HARMS ETAL	JA.
6.06	03-836-0115.0000	DONNA HARMS ETAL	DA.
0.43	03-836-0133.0000	NERRY M. FIBER	3A
4.37	03-936-0134.0000	JEROME ANDERSON & CATHY ANDERSON	34
103	03-836-0142.0000	MARK A ADAMS & MELDOY 1. ADAMS	DA
50.91	03-836-0145.0000	BRIAN L TESLONCH	HA
29.47	03-836-0125.0000	HERBERT C. WEAVER JR. A. ANTA H. WEAVER (SURV.)	IA.
3,00	03-836-0129 0000	DAVID LEE 125D, ELIZABETH JANE	LA
10.1	03-836-0127,0000	COLIN P NELLEY II, NANCY E TATLOR (SURV.)	NA
23.62	0000 R110-118 0000	DALE A HOPKING & DAVA M HOPKING (SURV.)	JA.
1.00	03-837-0127.0000	DIANNA ARACICH	MA
1.14	03-837-0125:0000	MICHAEL OWEN MATHESS	256
\$1.B1	03-842-0001.0000	SWINET IN HAIT	OA.
80.8	03-842-0002.0000	NOD EDWARD PATTSON JR.	- QA
5.00	03-842-0003.0000	DAMEL R. DORBY	DA
0.73	03-842-0005.0000	DUAME D. MILLER & BETTY J. MILLER	RA
DLT	03-842-0023.0000	NORTHERN HANCOCK BANK & TRUST COMPANY	AS.
0.64	03-842-0022.0000	JOHN DAVIS	TÁ
0.62	0.5-842-0021.0000	JOHN FREDERICK DAVIS	LIA:
0.92	03-842-0006,0000	HOUNN PAUCH	VA.
EE t	03-842-0012.0000	PROKEY D, CONLEY JR:	WA
0.85	03-842-0010.0000	ANDREW J. VARGO JR. JE HANCY L. VARGO	XA.
4.51	0.3-1942-0020.0000	RICHARD HAROLD KERRY & JOY CHAR KERRY (SURV.)	TA
100.05	03-842-0019.0000	ROCCO BASIL	.SA
12.15	03-842-0052.0000	PHYLIS P. MARKER	EA
	03-842-0054.0000	LAMES L BONAR ETAL	88
16.2	03-842-0055.0000	WHOSOR POWER HOUSE COAL CO.	90

	Y OWNERS	WELL BORE TABLE FOR SURFACE / ROYALT	
ACRES	TAX PARCEL	SURFACE OWNER (S) / ROYALTY OWNER (R)	TRACT
102 00	03-842-0033.0000	TRYMAWEE MIME (S)/(R)	1
ACRES	TAX PARCEL	SURFACE OWNER	TRACT
79.13	03-942-0029.0000	LUTHER ORIZZEL	2
18.87	03-842-0031.0000	LUTHER CRIZZEL	E
140.52	03-842-0032.0000	HENRY HENZROTH	4
291.95	03-841-0080.0000	TWA CITIN CONTINE	e
12.55	03-842-0071.0000	FRANK G ANSCOUGH & KELLY L ANSCOLUGH JTROS	8
28.1	03-1942-0009.0000	MICHAEL ENSMINGER	V
6.09	03-842-0007.0000	BARBARA C. MCFARLAND	В
13.25	0.5-842-0004.0000	ROD EDWARD PATTISON JR.	б
14.58	03-841-0106.0000	ROSER L SNODERLY & KAREN A SNODERLY (SURV.)	0.1
13.80	03-936-0119 0000	CHRISTOPHER S LOY & INCRED L LOY (SURV.)	11
34.11	03-836-0124.0000	DALE V HOPJONS	12
2.00	03-836-0121.0000	VIRGINIA MAY HUNT FORKER	13
51.1	03-B36-0122 0000	HOWARD M. ROCKHOLD & DEBROAH S. ROCKHOLD (SURV.)	14
0.53	03-1358-0123.0000	JOSEPH P. LIZON JR.	ě1
01.1	03-836-0131.0000	CHAPEL HILL CHURCH	at
8.47	03-836-0132 0000	RICKEY E FEIER	17

