

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

API 47-009-00237 County BROOKE District BUFFALO
Quad BETHANY Pad Name MIKE RYNIAWEC BRK PAD Field/Pool Name PANHANDLE FIELD WET
Farm name MIKE RYNIAWEC Well Number MIKE RYNIAWEC BRK 3H
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 4448997.45 Easting 533265.00
Landing Point of Curve Northing 4449298.84 Easting 533145.39
Bottom Hole Northing 4452287.49 Easting 532016.96

Elevation (ft) 1147.3 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

Date permit issued 1/9/2018 Date drilling commenced 2/10/2018 Date drilling ceased 4/5/2018
Date completion activities began 6/15/2018 Date completion activities ceased 7/31/2018
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 346 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 645 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 342 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Reviewed

[Signature] 1.17.19

Reviewed by:
GB 1.17.19

API 47-009 - 00237 Farm name MIKE RYNIAWEC Well number MIKE RYNIAWEC BRK 3H

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	126	NEW	J-55/94#		Y
Surface	17.5	13.375	430	NEW	J-55/54.50#	269.7, 305.7	Y, 30 BBLs
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1701	NEW	J-55/36#		Y, 18 BBLs
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	16917	NEW	HCP-110/20#		Y
Tubing		2.375	6208	NEW	P-110/4.7#		N
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	498	15.60	1.20	597.6	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	650	15.60	1.19	773.5	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,182	15.60	1.19	3,786.6	SURFACE	24
Tubing							

Drillers TD (ft) 16,917 Loggers TD (ft) 16,917
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5175

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: 7 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 PRODUCTION: 181 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 _____

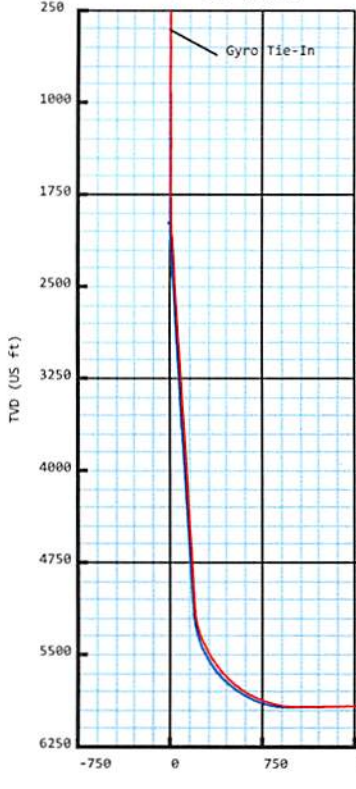


Mike Ryniawec BRK 3H
 Brooke Co, WV
 SDC 40
Plan vs Actual



Weatherford

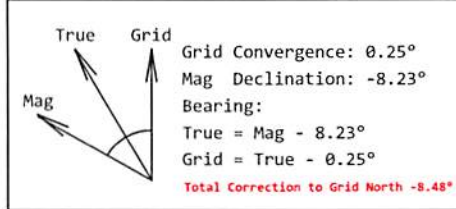
KB: 1173.4'
 GL: 1147.4'



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Plan Data for Mike Ryniawec BRK 3H

Plan Point Information:									
Dogleg Severity Unit: °/100.00ft				Position offsets from Slot centre					
MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface	Comments
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)	(°)
0.00	0.00	0.00	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.0
26.00	0.00	0.00	26.00	-0.00	-0.00	-0.00	0.00	0.00	0.0 KB Offset
2000.00	0.00	0.00	2000.00	-0.00	-0.00	-0.00	0.00	0.00	0.0 Nudge KOP
2200.00	4.00	10.00	2199.84	6.87	1.21	5.99	2.00	10.0	Hold
3488.00	4.00	10.00	3484.70	95.35	16.81	83.17	0.00	0.0	Turn
3657.97	4.00	319.67	3654.31	105.71	14.01	93.86	2.00	244.9	Hold
5181.93	4.00	319.67	5174.55	186.76	-54.79	194.04	0.00	0.0	Curve KOP 7° DLS
6127.99	70.00	338.69	5889.66	682.48	-261.19	730.75	7.00	19.5	Build/Turn 9° DLS
6359.07	90.79	339.22	5928.00	893.97	-342.52	957.34	9.00	1.5	Landing Point
16942.76	90.79	339.22	5782.00	10788.32	-4096.88	11540.03	0.00	0.0	PBHL Mike R3H

Target Set Information:

Name: Mike Ryniawec BRK 3H							
Position offsets from Slot centre							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Lat	Long
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(°)
LP Mike R3H	5928.00	736.54	-282.75	14597156.34	1749270.94	40.192735	-80.610208
PBHL Mike R3H	5782.00	10788.32	-4096.88	14607208.12	1745456.81	40.220383	-80.623713

Plan Data for Mike Ryniawec BRK 3H

Field: SOUTHWESTERN_BROOKE CO, WV UTM NAD 83 (17N)
 Map Unit: USft Vertical Reference Datum (VRD):
 Projected Coordinate System: NAD83 / UTM zone 17N

Site: Mike Ryniawec Pad

Unit: USfeet TVD Reference:
 Company Name: SOUTHWESTERN ENERGY
 Position: Northing: 14596413.14USft Latitude: 40.190691°
 Easting: 1749526.49USft Longitude: -80.609305°
 North Reference: Grid Grid Convergence: 0.25°
 Elevation Above VRD: 1173.00USft

Slot: Mike Ryniawec BRK 3H

Position:
 Offset is from Site centre
 +N/-S: 6.66USft Northing: 14596419.80USft Latitude: 40.190709°
 +E/-W: 27.20USft Easting: 1749553.69USft Longitude: -80.609207°
 Elevation Above VRD: 1147.40USft

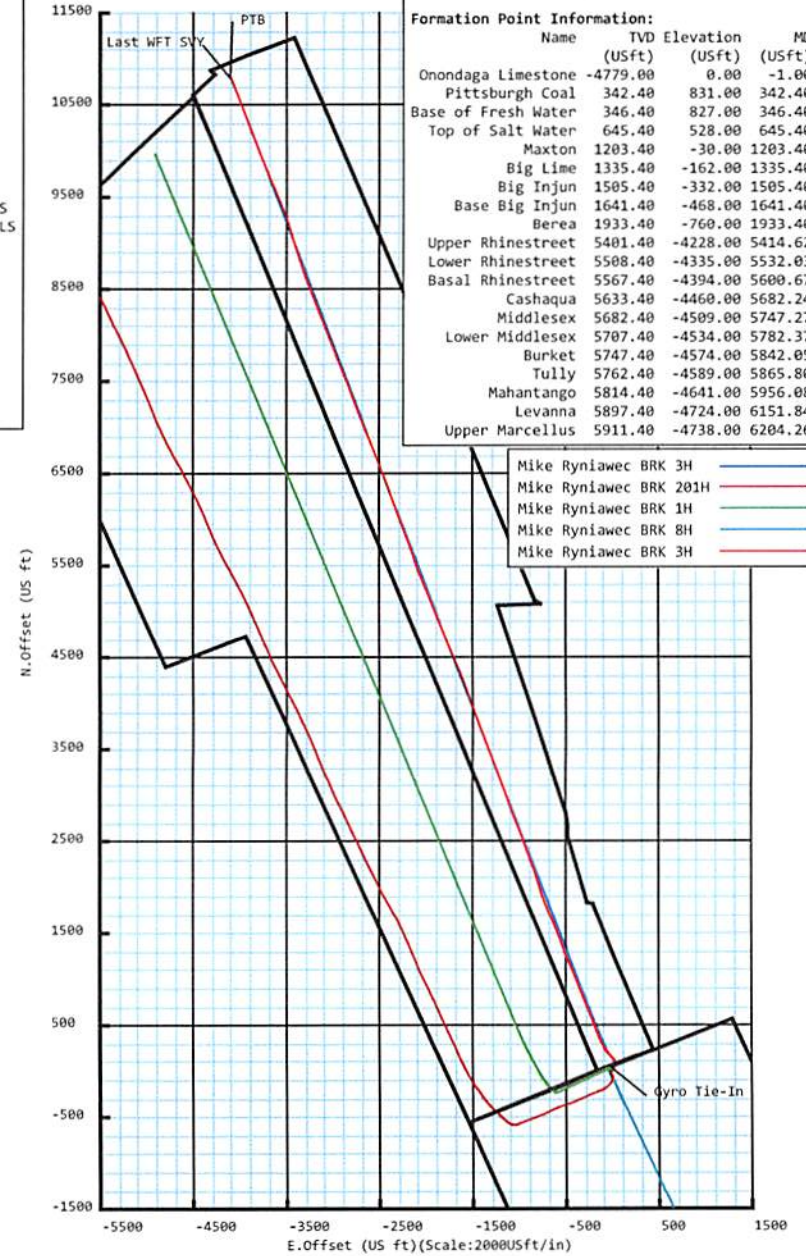
Well: Mike Ryniawec BRK 3H

Type: Main-Well
 File Number:
 Plan Folder: P1 Plan: P1:V2
 Vertical Section: Position offset of origin from Slot centre:
 +N/-S: 0.00USft Azimuth: 339.21°
 +E/-W: 0.00USft
 Magnetic Parameters:
 Model: Field Strength: Declination: Dip: Date:
 HDGM2016 52591(nT) -8.23° 67.60° 2018-03-20

Plan Data for Mike Ryniawec BRK 3H

Formation Point Information:

Name	TVD (USft)	Elevation (USft)	MD (USft)
Onondaga Limestone	-4779.00	0.00	-1.00
Pittsburgh Coal	342.40	831.00	342.40
Base of Fresh Water	346.40	827.00	346.40
Top of Salt Water	645.40	528.00	645.40
Maxton	1203.40	-30.00	1203.40
Big Lime	1335.40	-162.00	1335.40
Big Injun	1505.40	-332.00	1505.40
Base Big Injun	1641.40	-468.00	1641.40
Berea	1933.40	-760.00	1933.40
Upper Rhinestreet	5401.40	-4228.00	5414.62
Lower Rhinestreet	5508.40	-4335.00	5532.03
Basal Rhinestreet	5567.40	-4394.00	5600.67
Cashaqua	5633.40	-4460.00	5682.24
Middlesex	5682.40	-4509.00	5747.27
Lower Middlesex	5707.40	-4534.00	5782.37
Burket	5747.40	-4574.00	5842.05
Tully	5762.40	-4589.00	5865.80
Mahantango	5814.40	-4641.00	5956.08
Levanona	5897.40	-4724.00	6151.84
Upper Marcellus	5911.40	-4738.00	6204.26



Drawing By: Vilaphanh (Cot) Sinakone
 Date: 20 March 2018
 Office Name: Weatherford Drilling Services
 Address: 12101 Cutten Road
 Houston, TX 77066
 Phone: 281-701-4760



Weatherford®

Mike Ryniawec BRK 3H

Field Name: SOUTHWESTER N_BROOKE CO, WV UTM NAD 83 (17N)	Map Units: US ft	Company Name: SOUTHWESTERN ENERGY	
	Vertical Reference Datum (VRD):		
	Projected Coordinate System: NAD83 / UTM zone 17N		
Site: Mike Ryniawec Pad	Comment:		
	Units: US ft	North Reference: Grid	Convergence Angle: 0.25
	Position:	Northing: 14596413.14 US ft	Latitude: 40.190691
		Easting: 1749526.49 US ft	Longitude: -80.609305
Elevation above Field Reference: 1173.00 US ft			
Slot: Mike Ryniawec BRK 3H	Position (Relative to Site Centre)		
	+N/-S: 6.66 US ft	Northing: 14596419.80 US ft	Latitude: 40.190709
	+E/-W: 27.20 US ft	Easting: 1749553.69 US ft	Longitude: -80.609207
	Elevation above Field Reference: 1147.40 US ft		
Well: Mike Ryniawec BRK 3H	Comment:		
	Type: Main well	UWI:	
	File Number:	Comment:	
	Closure Distance: 11544.1 US ft	Closure Azimuth: 339.22°	
Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: -0.00 US ft	+E/-W: -0.00 US ft	Az: 339.21°

Drill floor: Survey Name: Definitive Survey			
Rig Height (Well TVD Reference): 26.00 US ft	Elevation above Field Reference: 1173.40 US ft	Inclination: 0.00°	Azimuth: 0.00°

Survey Name: Definitive Survey			
Date: 09/Feb/2018	Survey Tool: See Survey Tool Ranges below.	Comment:	Company:

Magnetic Model:				
Model Name: HDGM2016	Date: 20/Mar/2018	Field Strength: 52591.0 nT	Declination: -8.23°	Dip: 67.60°

Tie Point:					
MD: 0.00 US ft	Inclination: 0.00°	Azimuth: 0.00°	TVD: -0.00 US ft	North Offset: -0.00 US ft	East Offset: -0.00 US ft

Survey Tool Ranges:			
Name	Start MD(USft)	End MD(USft)	Source Survey
GYRO_GC_WIR+DPIPE_GYD	0.00	414.00	Gyro

5D Survey Report

Survey Tool Ranges:			
Name	Start MD(USft)	End MD(USft)	Source Survey
MWD	414.00	1640.00	WFT MWD_01
MWD	1640.00	4787.00	WFT MWD_02
MWD	4787.00	5575.00	WFT MWD_03
MWD	5575.00	7121.00	WFT MWD_04
MWD	7121.00	16917.00	WFT MWD_05

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
0.00	0.00	0.00	-0.00	0.00	-0.00	-0.00	40.190709	-80.609207	0.00	
50.00	0.47	20.13	50.00	0.15	0.19	0.07	40.190710	-80.609207	0.94	
100.00	0.41	346.03	100.00	0.49	0.56	0.10	40.190711	-80.609207	0.53	
150.00	0.13	343.31	150.00	0.72	0.79	0.04	40.190711	-80.609207	0.56	
200.00	0.55	71.92	200.00	0.77	0.92	0.25	40.190712	-80.609206	1.12	
250.00	0.79	64.05	249.99	0.79	1.14	0.79	40.190712	-80.609204	0.51	
300.00	1.03	63.03	299.99	0.87	1.50	1.50	40.190713	-80.609202	0.48	
350.00	1.02	53.66	349.98	1.03	1.96	2.26	40.190715	-80.609199	0.34	
400.00	0.98	49.26	399.97	1.30	2.51	2.94	40.190716	-80.609196	0.17	
414.00	0.70	45.02	413.97	1.37	2.64	3.09	40.190717	-80.609196	2.05	Gyro Tie-In
506.00	0.91	83.81	505.96	1.42	3.12	4.22	40.190718	-80.609192	0.62	
596.00	1.04	91.39	595.95	0.93	3.18	5.74	40.190718	-80.609186	0.20	
687.00	0.55	74.34	686.94	0.58	3.28	6.99	40.190718	-80.609182	0.59	
777.00	0.47	32.74	776.94	0.76	3.70	7.60	40.190719	-80.609180	0.41	
870.00	0.60	23.83	869.93	1.34	4.47	8.01	40.190721	-80.609178	0.17	
962.00	0.51	27.86	961.93	1.95	5.27	8.39	40.190724	-80.609177	0.11	
1055.00	0.72	12.66	1054.92	2.71	6.21	8.71	40.190726	-80.609176	0.28	
1145.00	0.75	28.57	1144.92	3.56	7.28	9.12	40.190729	-80.609174	0.23	
1238.00	0.39	38.94	1237.91	4.12	8.06	9.61	40.190731	-80.609172	0.40	
1330.00	0.16	115.22	1329.91	4.19	8.25	9.92	40.190732	-80.609171	0.42	
1423.00	0.50	130.34	1422.91	3.74	7.93	10.35	40.190731	-80.609170	0.37	
1516.00	0.13	268.80	1515.91	3.42	7.66	10.55	40.190730	-80.609169	0.65	
1605.00	0.34	308.86	1604.91	3.68	7.83	10.25	40.190731	-80.609170	0.29	
1640.00	0.14	321.36	1639.91	3.81	7.93	10.14	40.190731	-80.609171	0.59	
1727.00	0.23	22.29	1726.91	4.04	8.17	10.14	40.190732	-80.609171	0.23	
1819.00	0.27	38.54	1818.90	4.28	8.51	10.34	40.190733	-80.609170	0.09	
1912.00	0.32	12.55	1911.90	4.61	8.94	10.54	40.190734	-80.609169	0.15	
2005.00	2.49	353.88	2004.87	6.78	11.20	10.38	40.190740	-80.609170	2.35	
2098.00	4.74	356.56	2097.68	12.41	17.04	9.93	40.190756	-80.609171	2.43	
2190.00	4.97	356.14	2189.35	19.85	24.81	9.44	40.190777	-80.609173	0.25	
2283.00	3.52	11.19	2282.09	26.12	31.63	9.72	40.190796	-80.609172	1.95	
2376.00	3.13	11.32	2374.94	30.69	36.92	10.77	40.190811	-80.609168	0.42	
2468.00	2.77	8.64	2466.82	34.76	41.58	11.60	40.190823	-80.609165	0.42	
2561.00	4.05	2.97	2559.65	39.72	47.09	12.11	40.190838	-80.609163	1.42	
2654.00	4.09	358.69	2652.41	45.85	53.68	12.20	40.190857	-80.609162	0.33	
2747.00	3.84	355.72	2745.19	51.97	60.10	11.89	40.190874	-80.609163	0.35	
2839.00	3.94	2.51	2836.98	57.82	66.33	11.80	40.190891	-80.609164	0.51	
2932.00	4.50	16.65	2929.73	63.65	73.02	12.99	40.190910	-80.609159	1.27	
3025.00	4.44	17.75	3022.45	69.37	79.94	15.13	40.190929	-80.609152	0.11	
3117.00	4.04	14.31	3114.20	74.80	86.48	17.02	40.190947	-80.609145	0.52	
3210.00	3.64	9.71	3206.99	80.03	92.56	18.32	40.190963	-80.609140	0.54	
3303.00	3.33	2.72	3299.82	85.05	98.17	18.95	40.190979	-80.609138	0.56	
3396.00	3.10	336.28	3392.67	90.03	103.17	18.07	40.190992	-80.609141	1.60	
3488.00	4.32	327.86	3484.48	95.92	108.38	15.22	40.191007	-80.609151	1.45	
3581.00	4.76	325.96	3577.19	103.11	114.54	11.20	40.191024	-80.609165	0.50	
3674.00	4.50	325.39	3669.88	110.41	120.74	6.97	40.191041	-80.609180	0.28	
3767.00	4.16	320.69	3762.62	117.15	126.36	2.76	40.191056	-80.609195	0.53	
3859.00	3.63	317.33	3854.41	123.01	131.08	-1.33	40.191069	-80.609210	0.63	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
3952.00	3.67	314.77	3947.22	128.46	135.34	-5.44	40.191081	-80.609224	0.18	
4045.00	3.11	304.00	4040.06	133.23	138.85	-9.64	40.191091	-80.609239	0.91	
4138.00	3.67	321.55	4132.90	138.13	142.59	-13.59	40.191101	-80.609253	1.26	
4230.00	3.94	318.50	4224.69	143.89	147.26	-17.51	40.191114	-80.609267	0.37	
4323.00	3.58	316.93	4317.49	149.56	151.78	-21.61	40.191126	-80.609282	0.40	
4416.00	3.18	311.33	4410.33	154.53	155.60	-25.53	40.191137	-80.609296	0.56	
4509.00	3.60	331.38	4503.17	159.70	159.87	-28.87	40.191149	-80.609308	1.34	
4601.00	3.71	330.52	4594.98	165.51	165.00	-31.72	40.191163	-80.609318	0.13	
4694.00	3.49	325.31	4687.80	171.23	169.94	-34.81	40.191176	-80.609329	0.42	
4787.00	3.42	322.52	4780.63	176.63	174.47	-38.11	40.191189	-80.609341	0.20	
4880.00	3.26	321.09	4873.47	181.80	178.73	-41.46	40.191201	-80.609353	0.19	
4972.00	3.29	319.05	4965.32	186.77	182.76	-44.83	40.191212	-80.609365	0.13	
5065.00	4.27	316.39	5058.12	192.47	187.28	-48.97	40.191224	-80.609379	1.07	
5158.00	6.08	317.24	5150.74	200.23	193.40	-54.70	40.191241	-80.609400	1.95	
5204.00	9.47	320.60	5196.31	206.07	198.12	-58.76	40.191254	-80.609414	7.43	
5251.00	12.78	324.72	5242.42	214.77	205.35	-64.21	40.191274	-80.609434	7.24	
5297.00	16.16	327.16	5286.95	225.96	214.89	-70.63	40.191300	-80.609457	7.46	
5343.00	19.68	327.75	5330.72	239.82	226.82	-78.23	40.191333	-80.609484	7.66	
5390.00	22.92	329.77	5374.50	256.61	241.42	-87.07	40.191373	-80.609515	7.07	
5436.00	25.60	332.59	5416.43	275.32	257.99	-96.15	40.191419	-80.609547	6.35	
5483.00	28.34	332.67	5458.32	296.49	276.92	-105.95	40.191471	-80.609582	5.83	
5529.00	30.72	332.18	5498.34	319.00	297.01	-116.45	40.191526	-80.609619	5.20	
5575.00	32.99	332.96	5537.41	343.12	318.56	-127.63	40.191586	-80.609659	5.02	
5649.00	36.96	335.99	5598.04	385.38	356.84	-145.85	40.191691	-80.609724	5.85	
5696.00	40.55	337.66	5634.69	414.77	383.89	-157.41	40.191765	-80.609765	7.95	
5739.00	44.24	339.10	5666.44	443.75	410.84	-168.07	40.191840	-80.609802	8.87	
5785.00	46.62	339.16	5698.72	476.52	441.46	-179.75	40.191924	-80.609844	5.17	
5832.00	48.80	339.57	5730.34	511.28	474.00	-192.00	40.192013	-80.609887	4.68	
5878.00	51.51	339.43	5759.81	546.60	507.07	-204.36	40.192104	-80.609931	5.90	
5925.00	54.60	339.61	5788.06	584.15	542.26	-217.50	40.192201	-80.609977	6.58	
5971.00	59.44	338.72	5813.09	622.73	578.31	-231.23	40.192300	-80.610026	10.65	
6017.00	63.73	338.40	5834.97	663.18	615.96	-246.02	40.192404	-80.610078	9.35	
6064.00	66.67	337.40	5854.69	705.83	655.48	-262.07	40.192512	-80.610135	6.55	
6110.00	69.87	337.08	5871.71	748.53	694.88	-278.60	40.192621	-80.610194	6.99	
6156.00	72.54	337.97	5886.53	792.05	735.12	-295.25	40.192732	-80.610253	6.09	
6203.00	74.40	338.72	5899.91	837.10	776.99	-311.87	40.192847	-80.610312	4.24	
6249.00	77.58	339.78	5911.04	881.72	818.72	-327.68	40.192962	-80.610367	7.27	
6296.00	82.03	339.58	5919.36	927.97	862.09	-343.74	40.193081	-80.610424	9.48	
6339.00	85.56	339.04	5924.00	970.71	902.08	-358.84	40.193191	-80.610478	8.30	
6385.00	88.50	338.83	5926.39	1016.64	944.94	-375.35	40.193309	-80.610536	6.41	
6432.00	90.25	337.93	5926.90	1063.63	988.63	-392.67	40.193429	-80.610597	4.19	
6478.00	91.54	338.48	5926.18	1109.62	1031.34	-409.74	40.193546	-80.610658	3.05	
6571.00	90.55	337.89	5924.49	1202.59	1117.66	-444.30	40.193784	-80.610780	1.24	
6661.00	90.49	335.21	5923.67	1292.48	1200.22	-480.11	40.194011	-80.610907	2.98	
6753.00	91.11	338.90	5922.38	1384.39	1284.91	-515.96	40.194244	-80.611034	4.07	
6846.00	91.29	340.33	5920.44	1477.36	1372.07	-548.35	40.194484	-80.611149	1.55	
6939.00	91.15	340.06	5918.46	1570.33	1459.55	-579.85	40.194724	-80.611260	0.33	
7028.00	90.62	338.97	5917.08	1659.32	1542.91	-611.00	40.194954	-80.611371	1.36	
7121.00	93.58	336.52	5913.67	1752.21	1628.91	-646.19	40.195190	-80.611495	4.13	
7214.00	92.28	337.26	5908.92	1845.01	1714.33	-682.64	40.195425	-80.611624	1.61	
7307.00	89.94	338.50	5907.12	1937.95	1800.46	-717.65	40.195662	-80.611748	2.85	
7400.00	89.88	340.26	5907.26	2030.95	1887.50	-750.40	40.195901	-80.611864	1.89	
7492.00	90.37	344.21	5907.06	2122.80	1975.09	-778.46	40.196142	-80.611964	4.33	
7585.00	90.18	343.23	5906.62	2215.51	2064.36	-804.53	40.196388	-80.612055	1.07	
7678.00	90.62	340.38	5905.97	2308.40	2152.70	-833.57	40.196631	-80.612158	3.10	
7770.00	90.62	340.22	5904.97	2400.38	2239.31	-864.58	40.196869	-80.612268	0.17	
7863.00	90.74	340.74	5903.87	2493.35	2326.96	-895.65	40.197110	-80.612378	0.57	
7956.00	90.62	340.76	5902.76	2586.31	2414.75	-926.31	40.197351	-80.612486	0.13	
8049.00	90.86	339.61	5901.56	2679.29	2502.24	-957.83	40.197592	-80.612598	1.26	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
8141.00	90.92	338.93	5900.13	2771.28	2588.27	-990.39	40.197829	-80.612713	0.74	
8234.00	90.86	338.24	5898.69	2864.26	2674.84	-1024.35	40.198067	-80.612833	0.74	
8327.00	90.80	339.91	5897.34	2957.25	2761.69	-1057.56	40.198306	-80.612951	1.80	
8420.00	90.80	340.26	5896.04	3050.23	2849.12	-1089.23	40.198546	-80.613063	0.38	
8512.00	90.86	340.57	5894.71	3142.20	2935.79	-1120.07	40.198785	-80.613172	0.34	
8605.00	90.68	339.83	5893.46	3235.17	3023.29	-1151.57	40.199025	-80.613283	0.82	
8698.00	90.92	339.47	5892.16	3328.16	3110.47	-1183.90	40.199265	-80.613398	0.47	
8788.00	90.68	340.34	5890.91	3418.14	3194.98	-1214.82	40.199497	-80.613507	1.00	
8880.00	90.74	339.33	5889.77	3510.13	3281.34	-1246.53	40.199735	-80.613619	1.10	
8973.00	90.86	338.73	5888.47	3603.12	3368.17	-1279.81	40.199974	-80.613737	0.66	
9066.00	90.74	339.06	5887.17	3696.11	3454.92	-1313.30	40.200212	-80.613856	0.38	
9159.00	90.99	339.72	5885.77	3789.10	3541.96	-1346.03	40.200452	-80.613972	0.76	
9252.00	90.99	338.86	5884.16	3882.08	3628.94	-1378.91	40.200691	-80.614088	0.92	
9344.00	90.92	340.02	5882.62	3974.07	3715.06	-1411.22	40.200928	-80.614202	1.26	
9437.00	90.93	339.16	5881.12	4067.05	3802.21	-1443.65	40.201168	-80.614317	0.92	
9530.00	90.86	340.67	5879.67	4160.03	3889.54	-1475.58	40.201408	-80.614430	1.63	
9623.00	90.93	340.69	5878.22	4252.99	3977.29	-1506.34	40.201649	-80.614539	0.08	
9716.00	90.68	339.91	5876.91	4345.96	4064.84	-1537.69	40.201890	-80.614650	0.88	
9808.00	90.68	340.87	5875.82	4437.94	4151.50	-1568.56	40.202128	-80.614759	1.04	
9901.00	90.74	340.29	5874.67	4530.90	4239.20	-1599.48	40.202369	-80.614868	0.63	
9993.00	90.74	337.93	5873.48	4622.89	4325.14	-1632.28	40.202606	-80.614985	2.57	
10086.00	90.68	336.81	5872.33	4715.83	4410.97	-1668.06	40.202842	-80.615111	1.21	
10179.00	90.74	337.92	5871.17	4808.77	4496.80	-1703.85	40.203078	-80.615238	1.20	
10272.00	90.74	337.13	5869.97	4901.73	4582.73	-1739.40	40.203315	-80.615364	0.85	
10364.00	90.74	338.53	5868.78	4993.69	4667.92	-1774.11	40.203549	-80.615487	1.52	
10457.00	90.68	338.30	5867.63	5086.67	4754.39	-1808.32	40.203787	-80.615608	0.26	
10550.00	90.80	338.02	5866.43	5179.65	4840.71	-1842.92	40.204024	-80.615731	0.33	
10642.00	90.92	338.38	5865.05	5271.63	4926.12	-1877.08	40.204259	-80.615852	0.41	
10735.00	90.80	337.70	5863.65	5364.60	5012.36	-1911.85	40.204496	-80.615975	0.74	
10828.00	90.86	338.96	5862.31	5457.57	5098.78	-1946.19	40.204734	-80.616097	1.36	
10921.00	90.92	338.59	5860.86	5550.56	5185.46	-1979.86	40.204972	-80.616216	0.40	
11013.00	90.99	336.94	5859.33	5642.51	5270.60	-2014.66	40.205207	-80.616339	1.79	
11106.00	90.93	337.30	5857.77	5735.44	5356.27	-2050.82	40.205442	-80.616467	0.39	
11199.00	90.80	339.38	5856.37	5828.41	5442.69	-2085.14	40.205680	-80.616589	2.24	
11292.00	91.06	341.82	5854.86	5921.37	5530.39	-2116.02	40.205921	-80.616698	2.64	
11385.00	90.93	342.42	5853.24	6014.23	5618.89	-2144.57	40.206165	-80.616799	0.66	
11477.00	90.68	340.59	5851.95	6106.14	5706.12	-2173.75	40.206405	-80.616902	2.01	
11570.00	90.99	337.75	5850.59	6199.12	5793.03	-2206.81	40.206644	-80.617019	3.07	
11663.00	90.80	339.89	5849.14	6292.11	5879.73	-2240.41	40.206882	-80.617138	2.31	
11756.00	90.74	339.70	5847.89	6385.09	5967.00	-2272.53	40.207122	-80.617252	0.21	
11846.00	90.93	340.27	5846.58	6475.07	6051.55	-2303.33	40.207355	-80.617361	0.67	
11938.00	90.80	339.92	5845.19	6567.05	6138.05	-2334.65	40.207593	-80.617472	0.41	
12028.00	90.68	340.58	5844.03	6657.03	6222.74	-2365.06	40.207825	-80.617580	0.75	
12121.00	90.68	340.95	5842.92	6749.99	6310.55	-2395.69	40.208067	-80.617688	0.40	
12211.00	90.55	339.13	5841.96	6839.97	6395.13	-2426.41	40.208300	-80.617797	2.03	
12303.00	90.68	338.98	5840.97	6931.96	6481.05	-2459.30	40.208536	-80.617913	0.22	
12396.00	90.49	338.01	5840.02	7024.95	6567.57	-2493.39	40.208774	-80.618034	1.06	
12489.00	90.68	338.94	5839.07	7117.94	6654.08	-2527.51	40.209012	-80.618155	1.02	
12582.00	90.86	338.90	5837.82	7210.93	6740.85	-2560.95	40.209251	-80.618273	0.20	
12674.00	90.80	338.30	5836.49	7302.91	6826.49	-2594.52	40.209486	-80.618392	0.66	
12767.00	90.56	336.51	5835.39	7395.86	6912.35	-2630.25	40.209722	-80.618519	1.94	
12860.00	90.68	338.87	5834.38	7488.81	6998.37	-2665.55	40.209959	-80.618644	2.54	
12953.00	90.43	338.30	5833.48	7581.80	7084.95	-2699.50	40.210197	-80.618764	0.67	
13045.00	90.62	339.92	5832.64	7673.79	7170.89	-2732.30	40.210433	-80.618880	1.77	
13138.00	90.99	338.96	5831.33	7766.78	7257.96	-2764.96	40.210673	-80.618996	1.11	
13231.00	90.74	338.67	5829.92	7859.77	7344.66	-2798.56	40.210911	-80.619115	0.41	
13324.00	90.74	338.17	5828.72	7952.75	7431.14	-2832.77	40.211149	-80.619236	0.54	
13416.00	91.05	338.36	5827.29	8044.73	7516.59	-2866.83	40.211384	-80.619357	0.40	
13509.00	90.86	338.18	5825.74	8137.70	7602.97	-2901.26	40.211622	-80.619479	0.28	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
13602.00	91.60	338.29	5823.74	8230.67	7689.32	-2935.74	40.211859	-80.619601	0.80	
13695.00	91.05	338.92	5821.59	8323.64	7775.88	-2969.65	40.212098	-80.619721	0.90	
13788.00	91.05	339.91	5819.89	8416.62	7862.93	-3002.34	40.212337	-80.619837	1.06	
13880.00	90.88	337.42	5818.34	8508.60	7948.61	-3035.81	40.212573	-80.619955	2.71	
13973.00	90.86	340.05	5816.92	8601.57	8035.26	-3069.53	40.212811	-80.620075	2.83	
14066.00	90.80	339.33	5815.58	8694.56	8122.46	-3101.81	40.213051	-80.620189	0.78	
14158.00	90.68	338.35	5814.39	8786.55	8208.25	-3135.01	40.213287	-80.620307	1.07	
14248.00	90.74	338.55	5813.27	8876.53	8291.96	-3168.07	40.213517	-80.620424	0.23	
14338.00	90.74	339.19	5812.11	8966.53	8375.90	-3200.51	40.213748	-80.620539	0.71	
14430.00	90.49	338.09	5811.12	9058.51	8461.57	-3234.02	40.213984	-80.620658	1.23	
14523.00	90.62	339.76	5810.22	9151.51	8548.34	-3267.46	40.214222	-80.620776	1.80	
14613.00	90.62	340.87	5809.25	9241.48	8633.08	-3297.77	40.214455	-80.620883	1.23	
14706.00	90.49	341.26	5808.35	9334.43	8721.04	-3327.95	40.214697	-80.620990	0.44	
14798.00	90.62	341.75	5807.46	9426.35	8808.28	-3357.13	40.214937	-80.621093	0.55	
14891.00	90.25	341.03	5806.75	9519.28	8896.42	-3386.81	40.215179	-80.621198	0.87	
14984.00	90.49	342.83	5806.15	9612.17	8984.83	-3415.65	40.215423	-80.621300	1.95	
15077.00	90.62	343.30	5805.25	9704.95	9073.79	-3442.74	40.215667	-80.621396	0.52	
15170.00	90.92	343.03	5804.00	9797.72	9162.79	-3469.67	40.215912	-80.621491	0.43	
15262.00	90.68	341.18	5802.71	9889.59	9250.33	-3497.94	40.216153	-80.621591	2.03	
15352.00	90.55	339.05	5801.75	9979.57	9334.96	-3528.55	40.216385	-80.621699	2.37	
15445.00	90.55	338.07	5800.86	10072.56	9421.52	-3562.54	40.216623	-80.621820	1.05	
15538.00	90.37	337.09	5800.11	10165.52	9507.48	-3598.01	40.216860	-80.621945	1.07	
15630.00	90.43	337.50	5799.47	10257.46	9592.35	-3633.52	40.217093	-80.622071	0.45	
15723.00	90.37	337.34	5798.82	10350.42	9678.22	-3669.22	40.217330	-80.622198	0.18	
15816.00	90.62	337.56	5798.01	10443.37	9764.11	-3704.89	40.217566	-80.622324	0.36	
15909.00	90.62	337.89	5797.01	10536.33	9850.16	-3740.14	40.217803	-80.622449	0.35	
15998.00	90.56	336.89	5796.09	10625.28	9932.31	-3774.35	40.218029	-80.622571	1.13	
16091.00	90.93	339.29	5794.88	10718.25	10018.58	-3809.05	40.218266	-80.622694	2.61	
16184.00	90.19	339.18	5793.97	10811.24	10105.54	-3842.02	40.218505	-80.622810	0.80	
16277.00	90.56	339.85	5793.36	10904.24	10192.65	-3874.56	40.218745	-80.622926	0.82	
16369.00	90.55	340.02	5792.47	10996.23	10279.07	-3906.13	40.218982	-80.623037	0.19	
16462.00	90.12	339.74	5791.93	11089.22	10366.39	-3938.12	40.219223	-80.623151	0.55	
16555.00	90.12	338.63	5791.73	11182.22	10453.32	-3971.16	40.219462	-80.623268	1.19	
16648.00	90.25	339.57	5791.43	11275.22	10540.20	-4004.34	40.219701	-80.623385	1.02	
16741.00	90.43	339.84	5790.88	11368.21	10627.42	-4036.60	40.219940	-80.623499	0.35	
16833.00	90.80	341.29	5789.89	11460.18	10714.17	-4067.21	40.220179	-80.623608	1.63	
16894.00	90.68	340.53	5789.11	11521.14	10771.81	-4087.15	40.220338	-80.623678	1.26	Last WFT SVY
16917.00	90.68	340.53	5788.83	11544.14	10793.50	-4094.82	40.220397	-80.623705	0.00	PTB

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/15/2018
Job End Date:	7/15/2018
State:	West Virginia
County:	Brooke
API Number:	47-009-00237-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Mike Ryniawec Brk 3H
Latitude:	40.19070945
Longitude:	-80.60920693
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,853
Total Base Water Volume (gal):	20,110,454
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	81.48936	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.90113	

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EXCELERATE LX-1	Halliburton	Friction Reducer					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
SCAL16486A	NALCO	Scale Inhibitor					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
BIOC11219A	NALCO	Biocide					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				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	17.55272	
			Hydrochloric acid	7647-01-0	15.00000	0.12858	

			Polyacrylate	Proprietary	30.00000	0.02195	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02195	
			Fatty acid ester	Proprietary	5.00000	0.00732	
			Ethylene Glycol	107-21-1	30.00000	0.00648	
			Amine Triphosphate	Proprietary	30.00000	0.00648	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Sodium chloride	7647-14-5	5.00000	0.00366	
			Ethoxylated fatty acid	Proprietary	5.00000	0.00366	
			Ammonium chloride	12125-02-9	5.00000	0.00366	
			Methanol	67-56-1	60.00000	0.00316	
			Benzyl-(C12-C16 Alkyl)- Dimethyl-Ammonium Chloride	68424-85-1	30.00000	0.00158	
			Non-hazardous food substance	Proprietary	100.00000	0.00065	
			Glutaraldehyde	111-30-8	10.00000	0.00053	

* 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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MIKE RYNIAWEC BRK 3H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	5/24/2018	16,828	16,735	36
2	6/16/2018	16,700	16,593	42
3	6/16/2018	16,560	16,453	42
4	6/16/2018	16,420	16,313	42
5	6/17/2018	16,280	16,176	42
6	6/17/2018	16,140	16,033	42
7	6/18/2018	16,000	15,893	42
8	6/18/2018	15,860	15,753	42
9	6/19/2018	15,720	15,613	42
10	6/19/2018	15,580	15,474	42
11	6/20/2018	15,440	15,333	42
12	6/20/2018	15,300	15,193	42
13	6/20/2018	15,160	15,053	42
14	6/21/2018	15,020	14,911	42
15	6/22/2018	14,880	14,773	42
16	6/22/2018	14,740	14,633	42
17	6/22/2018	14,600	14,493	42
18	6/23/2018	14,460	14,353	42
19	6/23/2018	14,320	14,213	42
20	6/23/2018	14,180	14,073	42
21	6/24/2018	14,040	13,933	42
22	6/24/2018	13,900	13,793	42
23	6/24/2018	13,760	13,653	42
24	6/25/2018	13,620	13,513	42
25	6/25/2018	13,480	13,373	42
26	6/25/2018	13,342	13,233	42
27	6/25/2018	13,200	13,093	42
28	6/26/2018	13,060	12,953	42
29	6/26/2018	12,920	12,813	42
30	6/27/2018	12,780	12,673	42
31	6/27/2018	12,640	12,533	42
32	6/28/2018	12,500	12,393	42
33	6/28/2018	12,360	12,253	42
34	6/29/2018	12,220	12,113	42
35	6/29/2018	12,080	11,973	42
36	6/30/2018	11,940	11,833	42
37	6/30/2018	11,801	11,693	42
38	6/30/2018	11,660	11,553	42
39	7/1/2018	11,520	11,413	42
40	7/1/2018	11,380	11,273	42
41	7/1/2018	11,240	11,136	42
42	7/2/2018	11,103	10,993	42
43	7/2/2018	10,960	10,853	42

MIKE RYNIAWEC BRK 3H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
44	7/2/2018	10,820	10,713	42
45	7/3/2018	10,680	10,573	42
46	7/3/2018	10,540	10,433	42
47	7/4/2018	10,400	10,293	42
48	7/4/2018	10,260	10,153	42
49	7/4/2018	10,120	10,013	42
50	7/5/2018	9,980	9,873	42
51	7/6/2018	9,840	9,733	42
52	7/6/2018	9,700	9,593	42
53	7/7/2018	9,560	9,453	42
54	7/7/2018	9,420	9,313	42
55	7/7/2018	9,280	9,173	42
56	7/8/2018	9,140	9,033	42
57	7/8/2018	9,000	8,893	42
58	7/8/2018	8,860	8,753	42
59	7/9/2018	8,720	8,613	42
60	7/9/2018	8,580	8,473	42
61	7/9/2018	8,440	8,333	42
62	7/10/2018	8,300	8,193	42
63	7/10/2018	8,160	8,053	42
64	7/10/2018	8,020	7,913	42
65	7/10/2018	7,880	7,773	42

MIKE RYNIAWEC BRK 3H
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	6/15/2018	87	7,418	8,310	3,974	270,580	6,009	0
2	6/16/2018	99	8,006	5,806	4,085	497,800	8,040	0
3	6/16/2018	95	7,607	5,434	4,167	498,000	8,109	0
4	6/17/2018	92	7,718	5,835	4,787	448,510	7,433	0
5	6/17/2018	99	7,728	5,061	4,259	480,990	7,491	0
6	6/18/2018	84	7,050	5,371	4,110	488,960	10,734	0
7	6/18/2018	98	7,921	5,267	4,399	494,440	7,221	0
8	6/19/2018	98	7,821	5,322	4,156	500,520	7,889	0
9	6/19/2018	93	7,370	4,464	4,292	504,660	7,496	0
10	6/19/2018	98	7,928	5,321	4,306	485,780	7,057	0
11	6/20/2018	89	7,508	5,319	4,288	500,440	7,514	0
12	6/20/2018	98	7,832	6,627	4,166	498,460	7,163	0
13	6/21/2018	99	7,856	5,479	4,298	498,660	7,548	0
14	6/21/2018	97	7,994	5,076	4,342	486,150	7,134	0
15	6/22/2018	100	8,253	5,371	4,295	499,680	7,128	0
16	6/22/2018	97	7,891	5,666	4,373	484,580	6,832	0
17	6/22/2018	100	8,070	5,617	4,491	486,870	6,071	0
18	6/23/2018	68	8,419	5,404	4,224	10,050	3,619	0
19	6/23/2018	100	7,696	5,164	4,231	486,090	6,530	0
20	6/23/2018	99	7,633	5,407	4,291	483,740	6,759	0
21	6/24/2018	99	7,826	5,400	4,175	483,080	6,513	0
22	6/24/2018	99	7,902	5,430	4,449	484,660	6,448	0
23	6/24/2018	100	7,643	5,528	4,152	496,200	5,618	0
24	6/25/2018	100	7,760	5,761	4,270	483,280	6,020	0
25	6/25/2018	100	7,607	5,563	4,345	481,540	7,518	0
26	6/25/2018	100	7,335	5,625	4,415	495,900	5,648	0
27	6/26/2018	100	7,560	4,062	4,254	485,260	5,852	0
28	6/26/2018	99	7,553	3,966	4,549	480,400	5,763	0
29	6/26/2018	45	8,079	5,184	4,429	492,600	10,435	0
30	6/27/2018	89.9	7,344	5,186	3,553	490,920	7,608	0
31	6/28/2018	99.1	7,393	5,288	4,446	493,700	5,941	0
32	6/28/2018	96.2	7,187	5,325	4,424	433,690	7,258	0
33	6/29/2018	97.9	7,446	5,553	4,325	494,180	6,435	0
34	6/29/2018	93.9	7,596	5,535	4,286	497,300	5,712	0
35	6/30/2018	99.3	7,748	5,367	4,428	499,260	5,557	0
36	6/30/2018	100.3	7,495	5,560	4,396	492,020	6,419	0
37	6/30/2018	99.6	7,193	5,507	4,685	486,460	5,263	0
38	7/1/2018	98.5	7,565	5,538	4,329	495,520	5,456	0
39	7/1/2018	98	7,325	5,398	4,591	489,780	6,139	0
40	7/1/2018	99.9	7,251	5,526	4,380	494,080	5,209	0
41	7/1/2018	98.6	7,104	5,471	4,455	490,240	5,075	0
42	7/2/2018	99.1	7,104	5,629	4,673	493,200	6,054	0
43	7/2/2018	99.5	7,604	5,473	4,755	499,520	6,094	0
44	7/3/2018	100.1	7,144	5,715	4,344	499,620	6,436	0
45	7/3/2018	100.1	7,565	5,803	4,397	498,400	5,348	0
46	7/4/2018	100.4	7,173	5,458	4,604	490,240	5,247	0
47	7/4/2018	100.5	7,614	5,390	4,396	497,960	6,119	0
48	7/4/2018	97.9	7,643	5,404	4,320	492,720	6,382	0
49	7/5/2018	99.9	7,445	5,608	4,442	492,980	6,854	0
50	7/5/2018	100	7,062	5,320	4,651	487,760	6,487	0
51	7/6/2018	101	7,221	5,484	4,256	493,200	6,025	0
52	7/7/2018	95.96	7,596	5,572	4,624	485,720	6,385	0
53	7/7/2018	101	6,911	5,040	4,421	487,840	5,960	0

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MIKE RYNIAWEC BRK 3H

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	7/7/2018	99.6	6,846	5,511	4,519	484,820	5,798	0
55	7/8/2018	93.8	6,994	5,009	4,274	495,700	5,900	0
56	7/8/2018	100.6	7,071	5,717	4,630	485,520	6,115	0
57	7/8/2018	100.4	6,841	5,514	4,262	481,460	6,059	0
58	7/9/2018	100.3	6,888	5,405	4,306	493,820	5,572	0
59	7/9/2018	99.4	6,769	5,625	4,479	492,640	5,892	0
60	7/9/2018	100.6	6,949	5,399	4,457	499,680	6,477	0
61	7/9/2018	100.7	6,873	5,608	4,435	495,316	5,672	0
62	7/10/2018	100.9	6,798	5,142	4,416	498,680	5,910	0
63	7/10/2018	100.7	7,019	5,823	4,592	499,840	6,060	0
64	7/10/2018	99.5	6,940	5,543	4,636	491,580	5,423	0
65	7/11/2018	98.2	6,973	5,655	4,506	487,620	5,543	0

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Well Name:

MIKE RYNIAWEC BRK 3H

47009002370000

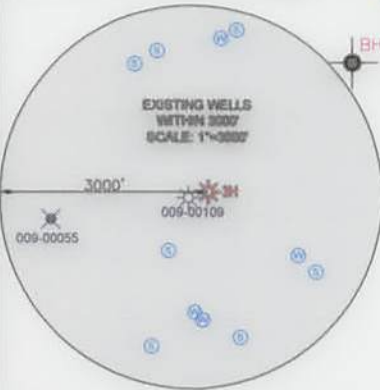
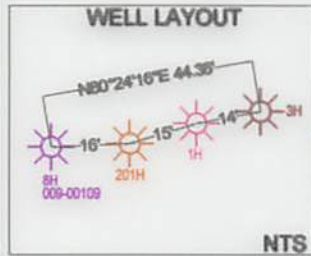
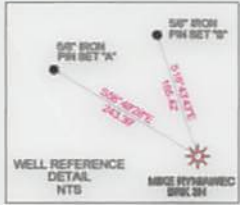
LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	0.00	0.00	346.00	346.00	
Top of Salt Water	645.00	645.00	NA	NA	
Pittsburgh Coal	342.00	342.00	348.00	348.00	
Big Injun (ss)	1505.00	1505.00	1933.00	1933.00	
Berea (siltstone)	1933.00	1933.00	5402.00	5402.00	
Rhinstreet (shale)	5402.00	5402.00	5759.00	5544.00	
Cashaqua (shale)	5848.00	5615.00	5917.00	5665.00	
Middlesex (shale)	5739.00	5667.00	5830.00	5729.00	
Burket (shale)	5830.00	5729.00	5852.00	5743.00	
Tully (ls)	5852.00	5743.00	5945.00	5799.00	
Mahantango (shale)	5945.00	5799.00	6216.00	5904.00	
Marcellus (shale)	6216.00	5904.00	NA	NA	GAS

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GIS MAPPING

www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43080
740-695-8100

LINE	BEARING	DISTANCE
L1	N06°53'22"E	1814.30'
L2	N13°11'51"W	1902.30'



SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448997.45 EASTING: 533265.00
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4449298.84 EASTING: 533145.39
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452287.49 EASTING: 532016.96

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. 2041



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200

PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)

COMPANY: **SWN** Production Company, LLC

MIKE RYNIAWEC BRK
OPERATOR'S WELL #: 3H
API WELL #: 47 STATE 009 COUNTY 00237 PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH
DISTRICT: BUFFALO COUNTY: BROOKE
SURFACE OWNER: MIKE RYNIAWEC
OIL & GAS ROYALTY OWNER: MIKE RYNIAWEC

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,927' TVD 16,917.0' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

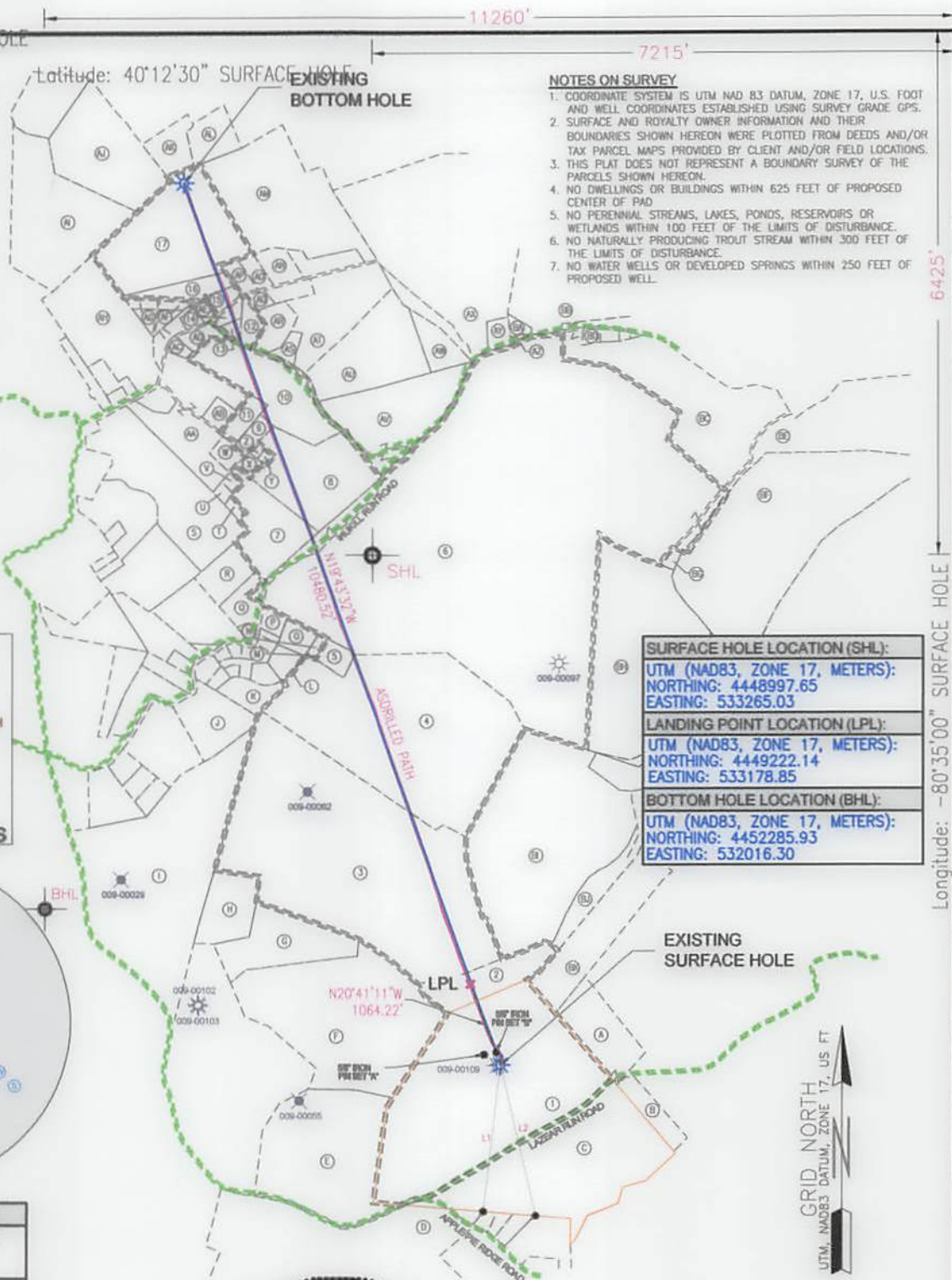
DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ⊙ EXISTING / PRODUCING WELLHEAD LPL* LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊙ EXISTING SPRING	REVISIONS:	DATE: 10-10-2018
○ SURVEYED BOUNDARY ===== LEASE BOUNDARY - - - - - ASDRILLED PATH - - - - - PROPOSED PATH		DRAWN BY: D. REED SCALE: 1" = 2000' DRAWING NO: 2017-220 WELL LOCATION PLAT

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.

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4448997.65 EASTING: 533265.03
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4449222.14 EASTING: 533178.85
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4452285.93 EASTING: 532016.30



Latitude: 40°12'30" SURFACE HOLE

Latitude: 40°12'30" SURFACE HOLE

11260'

7215'

6425'

10781'

Longitude: -80°35'00" SURFACE HOLE

Longitude: -80°35'00" BOTTOM HOLE

REVISIONS:

COMPANY:



DATE: 10-10-2018	OPERATOR'S: MIKE RYNAWEC BRK	WELL #: 3H
DRAWN BY: D. REED	COUNTY: BROOKE	DISTRICT: BUFFALO
SCALE: N/A	STATE: WV	
DRAWING NO: 2017-220		
WELL LOCATION PLAT		

PROPERTY NUMBER 25011165347
 PAD ID 3001155610

TRACT	TAX PARCEL	ADJOINING OWNERS TABLE	TAX PARCEL	ACRES
	03-842-0055.0000	RYNAWEC MIKE (S)/(R)	03-842-0055.0000	102.00
	03-842-0055.0000	RYNAWEC MIKE (S)/(R)	03-842-0055.0000	102.00
	03-842-0054.0000	CARL THOMAS BONAR ET AL	03-842-0054.0000	4.64
	03-842-0032.0000	HENRY HENKROTH	03-842-0032.0000	140.52
	03-842-0018.0000	BOSCO BASIL	03-842-0018.0000	104.56
	03-842-0018.0000	RICKY CONLEY & DEBRA CONLEY	03-842-0018.0000	2.14
	03-837-0087.0000	LINDA REEVES GREATHOUSE AND VICKI LYNN HAMILTON	03-837-0087.0000	372.23
	03-842-0001.0000	EVELYN BLAKE, ET AL	03-842-0001.0000	18.12
	03-837-0130.0000	VICTOR CHARLES SMITH	03-837-0130.0000	27.35
	03-837-0121.0000	VICTOR CHARLES SMITH	03-837-0121.0000	1.00
	03-837-0129.0000	RHONDA S BALEY, REVA L CALDWELL, LEONARD SAMUEL, VICTOR CHARLES SMITH	03-837-0129.0000	22.52
	03-837-0120.0000	VICTOR CHARLES SMITH	03-837-0120.0000	1.00
	03-837-0099.0000	MARGARET M SMITH ALISON MEDIA	03-837-0099.0000	2.88
	03-837-0100.0001	LUTHER WILLIAMS	03-837-0100.0001	0.96
	03-837-0100.0000	MARY HAWLEY	03-837-0100.0000	1.35
	03-837-0108.0000	BURT E HUNT & LOIS M HUNT	03-837-0108.0000	2.00
	03-837-0094.0001	GEORGE M LEWIS & JUDY A LEWIS	03-837-0094.0001	5.56
	03-837-0041.0000	VICKI C LOUGHERY & SHEENA R LOUGHERY	03-837-0041.0000	41.00
	03-842-0064.0000	RULPH O SMITH & GINA L SMITH (SURV)	03-842-0064.0000	12.60
	03-842-0035.0000	DOUGLAS L TURNER & BEJAMIN TURNER	03-842-0035.0000	5.00
	03-842-0034.0000	MIKE RYNAWEC	03-842-0034.0000	61.17
	03-847-0018.0000	JOSEPH S BURK & JANE M BURK	03-847-0018.0000	117.88
	03-847-0018.0000	ELIZABETH ELLEN FLUWARTY	03-847-0018.0000	52.00
	03-842-0029.0000	LUTHER GRIZZEL	03-842-0029.0000	78.13
	03-842-0031.0000	LUTHER GRIZZEL	03-842-0031.0000	18.87
	03-842-0030.0000	LUTHER GRIZZEL	03-842-0030.0000	10.48
	03-841-0080.0000	JAY GLEN COLLINS	03-841-0080.0000	291.95
	03-842-0071.0000	FRANK G ANSCOUGH & KELLY L ANSCOUGH	03-842-0071.0000	12.56
	03-842-0020.0000	RICHARD HAROLD KENNY & JOY LYNN KENNY (SURV)	03-842-0020.0000	4.51
	03-842-0019.0001	BRUCE & DWLENE HENTHORN	03-842-0019.0001	0.08
	03-842-0017.0000	EDWARD E CONLEY & NANCY J CONLEY	03-842-0017.0000	0.04
	03-842-0016.0000	EDWARD E CONLEY & NANCY J CONLEY	03-842-0016.0000	0.74
	03-842-0015.0000	EDWARD E CONLEY & NANCY J CONLEY	03-842-0015.0000	3.10
	03-842-0026.0000	DANIEL R CONRY	03-842-0026.0000	1.97
	03-842-0003.0000	DANIEL R CONRY	03-842-0003.0000	5.00
	03-842-0002.0000	ROD EDWARD PATISON JR	03-842-0002.0000	6.08
	03-836-0124.0000	DALE V HOPKINS	03-836-0124.0000	34.11
	03-837-0125.0000	MICHAEL OWEN MATHESS	03-837-0125.0000	1.14
	03-837-0127.0000	DANNA ANKICH	03-837-0127.0000	1.00
	03-837-0128.0000	DANNA ANKICH	03-837-0128.0000	0.87
	03-837-0128.0000	WINDSOR POWER HOUSE COAL CO	03-837-0128.0000	1.99
	03-837-0124.0000	VERNON SMITH	03-837-0124.0000	1.00
	03-837-0123.0000	LETHA SMITH JOHNSON & MAURY JOHNSON (SURV)	03-837-0123.0000	0.52
	03-837-0122.0000	LETHA SMITH & MAURY JOHNSON (SURV)	03-837-0122.0000	0.48
	03-837-0119.0000	DALE V HOPKINS & DANA M HOPKINS (SURV)	03-837-0119.0000	23.62
	03-837-0119.0001	CURTIS JOHN MILLER	03-837-0119.0001	1.95
	03-837-0118.0001	WILLIAM D EMREY JR & MARCIA J EMREY (SURV)	03-837-0118.0001	1.00
	03-837-0118.0000	THOMAS W ANKICH & DANNA M ANKICH (SURV)	03-837-0118.0000	2.03
	03-837-0109.0000	BURT E HUNT & LOIS M HUNT	03-837-0109.0000	1.08
	03-837-0115.0000	ROBERT LATHANCE	03-837-0115.0000	1.07
	03-837-0116.0000	JOHN JOSEPH HUFF & CHRISTINE C HUFF	03-837-0116.0000	1.08
	03-836-0125.0000	HERBERT G BEAVER JR & ANITA H BEAVER (SURV)	03-836-0125.0000	28.47
	03-836-0157.0000	JOHN A CASTLO	03-836-0157.0000	38.50
	03-836-0156.0000	TAVONNO CUMAR, EBAN M; ANTONIO (SURV)	03-836-0156.0000	33.53
	03-837-0030.0000	CLYDE E BECKETT & KATHRYN J BECKETT	03-837-0030.0000	6.73
	03-837-0034.0000	RALPH WALTON JR & CYNOL A WALTON	03-837-0034.0000	6.79
	03-837-0103.0000	VICKI C LOUGHERY & SHEENA R LOUGHERY (SURV)	03-837-0103.0000	38.92
	03-837-0105.0000	SMITH HEIRS	03-837-0105.0000	3.89
	03-837-0107.0000	GEORGE M LEWIS & JUDY A LEWIS	03-837-0107.0000	2.00
	03-837-0106.0000	ROY HUFF & VIRGINIA C HUFF (SURV)	03-837-0106.0000	2.00
	03-837-0101.0000	CEORGE D BARR & PEARL L BARR (SURV)	03-837-0101.0000	1.10
	03-837-0098.0000	MICHAEL V KOENIG	03-837-0098.0000	5.18
	03-837-0097.0000	WYNNE A RICHMOND & MONA RICHMOND	03-837-0097.0000	1.56
	03-837-0096.0000	WYNNE A RICHMOND & MONA RICHMOND	03-837-0096.0000	19.67
	03-837-0095.0000	ALLEN SMITH MICHAEL, JOHN NICHOLSON ETAL	03-837-0095.0000	26.55
	03-837-0094.0000	CHRISTOPHER SCOTT MILLER	03-837-0094.0000	24.20
	03-837-0093.0000	KEVIN CHAMBER	03-837-0093.0000	5.91
	03-837-0091.0000	DEBRA F CYBERT, MATTHEW FAIR ETAL	03-837-0091.0000	53.93
	03-837-0090.0000	ROBERT BONE	03-837-0090.0000	2.04
	03-837-0090.0001	ROBERT BONE	03-837-0090.0001	0.12
	03-837-0089.0000	ROBERT BONE	03-837-0089.0000	0.78
	03-837-0088.0000	DEBRA F CYBERT, MATTHEW FAIR ET AL	03-837-0088.0000	58.95
	03-837-0077.0000	BRIAN K HANEY & GINA M HANEY (SURV)	03-837-0077.0000	45.75
	03-837-0086.0000	CARL R CLARK & SANDRA S CLARK (SURV)	03-837-0086.0000	0.83
	03-837-0076.0000	LPS INVESTMENT PARTNERSHIP	03-837-0076.0000	65.00
	03-837-0076.0000	ELLEN B SANDRHO	03-837-0076.0000	66.00
	03-842-0049.0000	EDGAR S ERDMAN & CECILIA M ERDMAN	03-842-0049.0000	0.83
	03-842-0060.0002	JAMES HAZLETT & JO ELLIN HAZLETT (SURV)	03-842-0060.0002	65.47
	03-842-0052.0000	FRANK P MANKER	03-842-0052.0000	91.51
	03-842-0053.0000	WINDSOR POWER HOUSE COAL CO	03-842-0053.0000	5.80
	03-842-0055.0000	WINDSOR POWER HOUSE COAL CO	03-842-0055.0000	21.00

TRACT	TAX PARCEL	WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS	TAX PARCEL	ACRES
	03-842-0055.0000	RYNAWEC MIKE (S)/(R)	03-842-0055.0000	102.00
	03-842-0054.0000	CARL THOMAS BONAR ET AL	03-842-0054.0000	4.64
	03-842-0032.0000	HENRY HENKROTH	03-842-0032.0000	140.52
	03-842-0018.0000	BOSCO BASIL	03-842-0018.0000	104.56
	03-842-0018.0000	RICKY CONLEY & DEBRA CONLEY	03-842-0018.0000	2.14
	03-837-0087.0000	LINDA REEVES GREATHOUSE AND VICKI LYNN HAMILTON	03-837-0087.0000	372.23
	03-842-0001.0000	EVELYN BLAKE, ET AL	03-842-0001.0000	18.12
	03-837-0130.0000	VICTOR CHARLES SMITH	03-837-0130.0000	27.35
	03-837-0121.0000	VICTOR CHARLES SMITH	03-837-0121.0000	1.00
	03-837-0129.0000	RHONDA S BALEY, REVA L CALDWELL, LEONARD SAMUEL, VICTOR CHARLES SMITH	03-837-0129.0000	22.52
	03-837-0120.0000	VICTOR CHARLES SMITH	03-837-0120.0000	1.00
	03-837-0099.0000	MARGARET M SMITH ALISON MEDIA	03-837-0099.0000	2.88
	03-837-0100.0001	LUTHER WILLIAMS	03-837-0100.0001	0.96
	03-837-0100.0000	MARY HAWLEY	03-837-0100.0000	1.35
	03-837-0108.0000	BURT E HUNT & LOIS M HUNT	03-837-0108.0000	2.00
	03-837-0094.0001	GEORGE M LEWIS & JUDY A LEWIS	03-837-0094.0001	5.56
	03-837-0041.0000	VICKI C LOUGHERY & SHEENA R LOUGHERY	03-837-0041.0000	41.00

ВНЕШНО ДИЗИЈА:	ВООКЕ СОПЛА:	М СТАЈЕ:	МЕТ ГОСУДИОН БГЛ БРЪМНИС НО: 2013-550 ЗСАТЕ: И\У БРЪМНИ БЛ: D' BEED DATE: 10-10-2018
МЕТ #:	3Н		
ОБЕВУЛОЗ,2	НИКЕ БУИГАМЕС ВРК		
	Production Company LLC		Production Company LLC
	ЗМИ		ЗМУ
БЕЛГИЈОЗ:	СОМПАНИ:		

8K	ANDREW HOMER HODGE COMF CO	02-843-00270000	3100
8P	ANDREW HOMER HODGE COMF CO	02-843-00270000	290
8I	БРАУЕР И' РАМЕР	02-843-00250000	8121
8H	ТМРЕЗ ИМЗТЕЛ П' ТО ЕТЕН ИМЗТЕЛ (2018)	02-843-00870000	8243
8C	ЕДОН З' ЕДОНН П' СЕДЕТН П' ЕДОНН	02-843-00400000	092
8L	ЕТЕН П' ЗМЛОМО	02-821-00380000	8800
8E	ГЪЗ ИМЗДРЕК ИМЗМЕНОН	02-821-00880000	8200
8D	СМГ Б' СТУБК П' ЗМОНУ З' СТУБК (2018)	02-821-00880000	092
8C	БВМН К' ИМЕА П' СМН П' ИМЕА (2018)	02-821-00330000	4232
8B	DEBBY E. CASHEN: WILHEM EVH E1 W	02-821-00880000	2882
8V	ROBERT BONE	02-821-00880000	038
8S	ROBERT BONE	02-821-00800001	013
8A	ROBERT BONE	02-821-00800000	304
8X	DEBBY E. CASHEN: WILHEM EVH E1 W	02-821-00870000	8282
8M	KEVIN SCHINEL	02-821-00870000	281
8A	CHRISTOPHER SCOLL WITEN	02-821-00840000	5430
8P	УТЕН ЗРИН' РИЧМЕТ' ТОНИ ИСНОГООН ЕМ'	02-821-00870000	5822
8I	ИВАМЕ УТЕН ИСНОМО	02-821-00880000	1883
8G	ИВАМЕ У' ИСНОМО П' ИВАМЕ ИСНОМО	02-821-00830000	128
8B	RICHMET A KOENIG	02-821-00880000	218
8D	GEORGE D. FEMO П' ИВАМЕ Г' БВМН (2018)	02-821-01010000	110
8E	GEORGE M. FEMO П' ИВАМЕ Г' БВМН	02-821-01030000	308
8D	НОА ХИЛ П' АБОНА С' ХИЛ (2018)	02-821-01080000	300
8A	ЗРИН НЕБЕЗ	02-821-01070000	288
8M	АККЕ С' ГОЛОЧЕВА П' ЗИДЕВ И' ГОЛОЧЕВА (2018)	02-821-01070000	2883
8T	ИВАМЕ ИСНОМО П' П' СМГ Т' ИСНОМО	02-821-00240000	838
8K	STADE E. BECKEL П' КУДВАН Т' BECKEL	02-821-00270000	832
8P	ИВАМЕ ИСНОМО П' ИВАМЕ ИСНОМО (2018)	02-828-01280000	2222
8I	ТОНИ У' СМЛЕТ	02-828-01230000	2820
8H	HERBESL C. MEWEN П' П' ИВАМЕ И' MEWEN (2018)	02-828-01520000	5843
8C	ТОНИ JOSEPH HELL П' CHRISTINE C. HELL	02-821-01180000	108
8E	ROBERT FALWANCE	02-821-01120000	103
8C	БРАУЕР Е' ИВАМЕ П' ГОЗ И' ИВАМЕ	02-821-01080000	108
8D	ИВАМЕ И' ИВАМЕ П' ИВАМЕ И' ИВАМЕ (2018)	02-821-01180000	302
8C	ИВАМЕ П' ИВАМЕ П' ИВАМЕ Т' ИВАМЕ (2018)	02-821-01180001	100
8B	СМГ ТОНИ ИТЕН	02-821-01180001	182
8W	ОМЕ А' ИВАМЕ П' ИВАМЕ И' ИВАМЕ (2018)	02-821-01180000	3283
8	ТЕДНУ ЗРИН П' ИВАМЕ ИСНОМО (2018)	02-821-01330000	048
8	ТЕДНУ ЗРИН ИСНОМО П' ИВАМЕ ИСНОМО (2018)	02-821-01320000	023
8	АБОНА ЗРИН	02-821-01240000	100
8	ANDREW HOMER HODGE COMF CO	02-821-01280000	188
8	DWYH WYDICH	02-821-01380000	083
8	DWYH WYDICH	02-821-01330000	100
8	RICHMET OMEN WYDICH	02-821-01520000	114
8	ОМЕ А' ИВАМЕ	02-828-01540000	2411
8	НОД ЕДОННО ИВАМЕ П' И	02-843-00030000	808
8	ОМЕТ Б' СОВБА	02-843-00020000	200
8	ОМЕТ Б' СОВБА	02-843-00380000	183
8	ЕДОННО Е' СОВБА П' ИВАМЕ Т' СОВБА	02-843-00120000	270
8	ЕДОННО Е' СОВБА П' ИВАМЕ Т' СОВБА	02-843-00180000	034
8	ЕДОННО Е' СОВБА П' ИВАМЕ Т' СОВБА	02-843-00130000	004
8	ИВАМЕ П' ИВАМЕ ИСНОМО	02-843-00180001	008
8	ИСНОМО ИВАМЕ ИВАМЕ П' ИВАМЕ ИВАМЕ (2018)	02-843-00300000	421
8	ИВАМЕ С' ИВАМЕ П' ИВАМЕ Г' ИВАМЕ	02-843-00310000	1322
8	ИВАМЕ ИВАМЕ	02-841-00800000	58182
8	ИВАМЕ ИВАМЕ	02-843-00200000	1048
8	ИВАМЕ ИВАМЕ	02-843-00210000	1883
8	ИВАМЕ ИВАМЕ	02-843-00380000	1812
8	ЕТЕН ИВАМЕ ИВАМЕ	02-841-00180000	2300
8	РОЗЕВН З' ВРБЕК П' ИВАМЕ И' ВРБЕК	02-843-00180000	11388
8	НИКЕ БУИГАМЕС	02-843-00240000	8113
8	ИВАМЕ Г' ИВАМЕ П' ИВАМЕ ИВАМЕ	02-843-00220000	200
8	ИВАМЕ О' ЗРИН П' ИВАМЕ Г' ЗРИН (2018)	02-843-00840000	1380
ИВАМЕ	ЗРИН ИВАМЕ	ИВАМЕ ИВАМЕ	ИВАМЕ

13	АККЕ С' ГОЛОЧЕВА П' ЗИДЕВ И' ГОЛОЧЕВА	02-821-00410000	4100
18	GEORGE M. FEMO П' ИВАМЕ Г' БВМН	02-821-00410001	228
12	БРАУЕР Е' ИВАМЕ П' ГОЗ И' ИВАМЕ	02-821-01080000	300
14	ИВАМЕ ИВАМЕ	02-821-01000000	122
12	ИВАМЕ ИВАМЕ	02-821-01000001	088
13	ИВАМЕ И' ЗРИН ИВАМЕ ИВАМЕ	02-821-00880000	388
11	АККЕ ИВАМЕ ИВАМЕ	02-821-01300000	200
10	ИВАМЕ И' ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ	02-821-01380000	3223
8	АККЕ ИВАМЕ ИВАМЕ	02-821-01310000	100
8	АККЕ ИВАМЕ ИВАМЕ	02-821-01200000	3322
3	ЕВАМЕ ИВАМЕ Е1 W	02-843-00010000	1813
8	ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ	02-821-00830000	21332
2	ИВАМЕ ИВАМЕ П' ИВАМЕ ИВАМЕ	02-843-00180000	314
4	ИВАМЕ ИВАМЕ	02-843-00180000	10428
2	ИВАМЕ ИВАМЕ ИВАМЕ	02-843-00230000	14023
3	СМГ ИВАМЕ ИВАМЕ Е1 W	02-843-00240000	484
ИВАМЕ	ЗРИН ИВАМЕ	ИВАМЕ ИВАМЕ	ИВАМЕ
ИВАМЕ	ЗРИН ИВАМЕ (2) \ РОУЛТЛ ИВАМЕ (8)	ИВАМЕ ИВАМЕ	ИВАМЕ
МЕТ ВОРЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ ИВАМЕ			

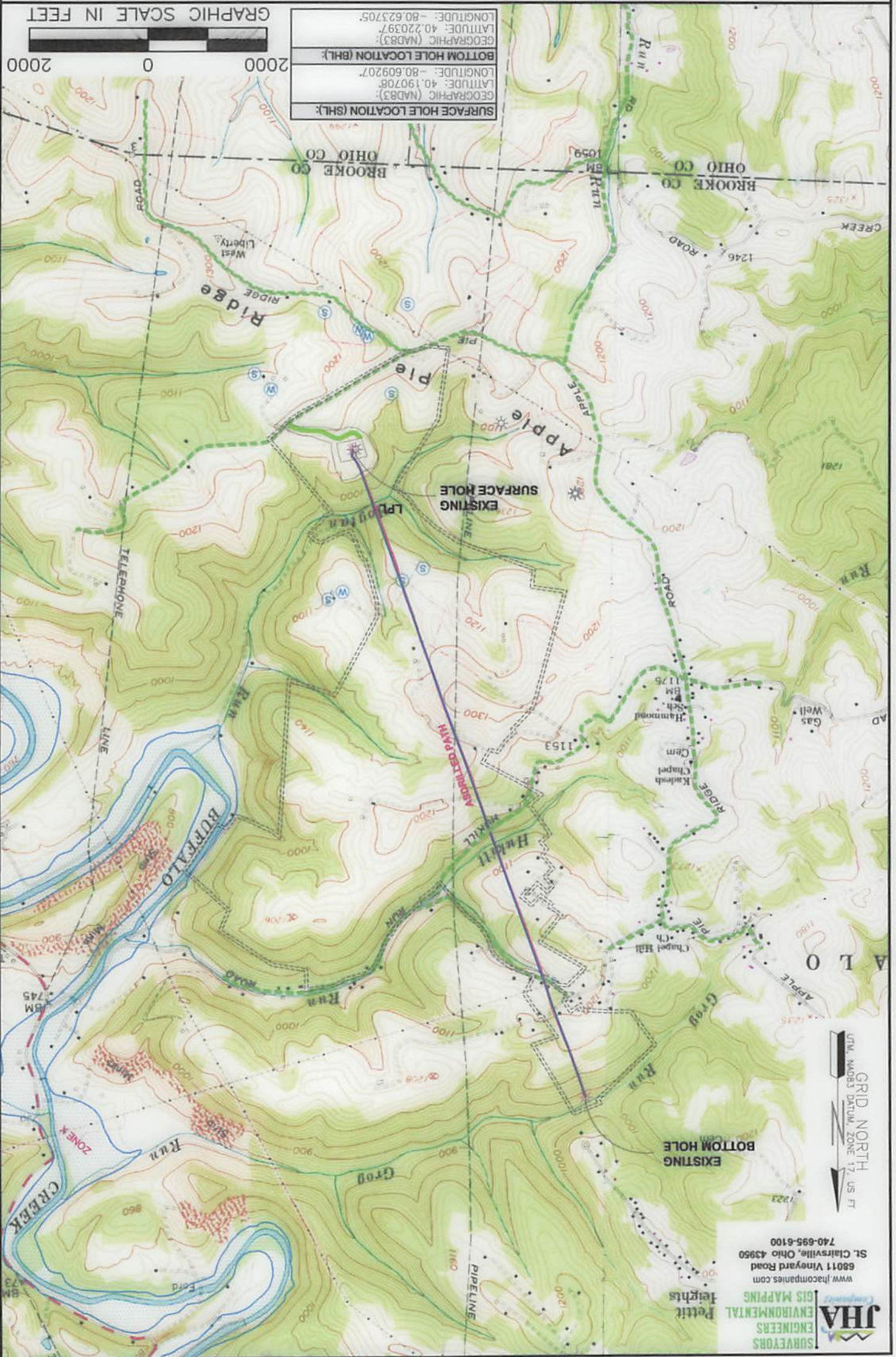
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC		WELL (FARM) NAME: MIKE RYNAWEC BRK	
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378		COUNTY - CODE BROOKE - 009	DISTRICT: BUFFALO
SURFACE OWNER: MIKE RYNAWEC		USGS 7 1/2 QUADRANGLE MAP NAME: BETHANY, WV	
WELL #	SERIAL #	WELL #	SERIAL #

NOTES ON SURVEY

1. SURFACE AND OWNERS 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 DESIGNATED.

LEGEND:

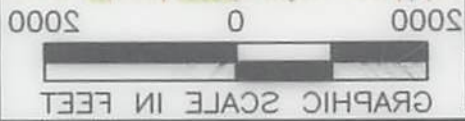
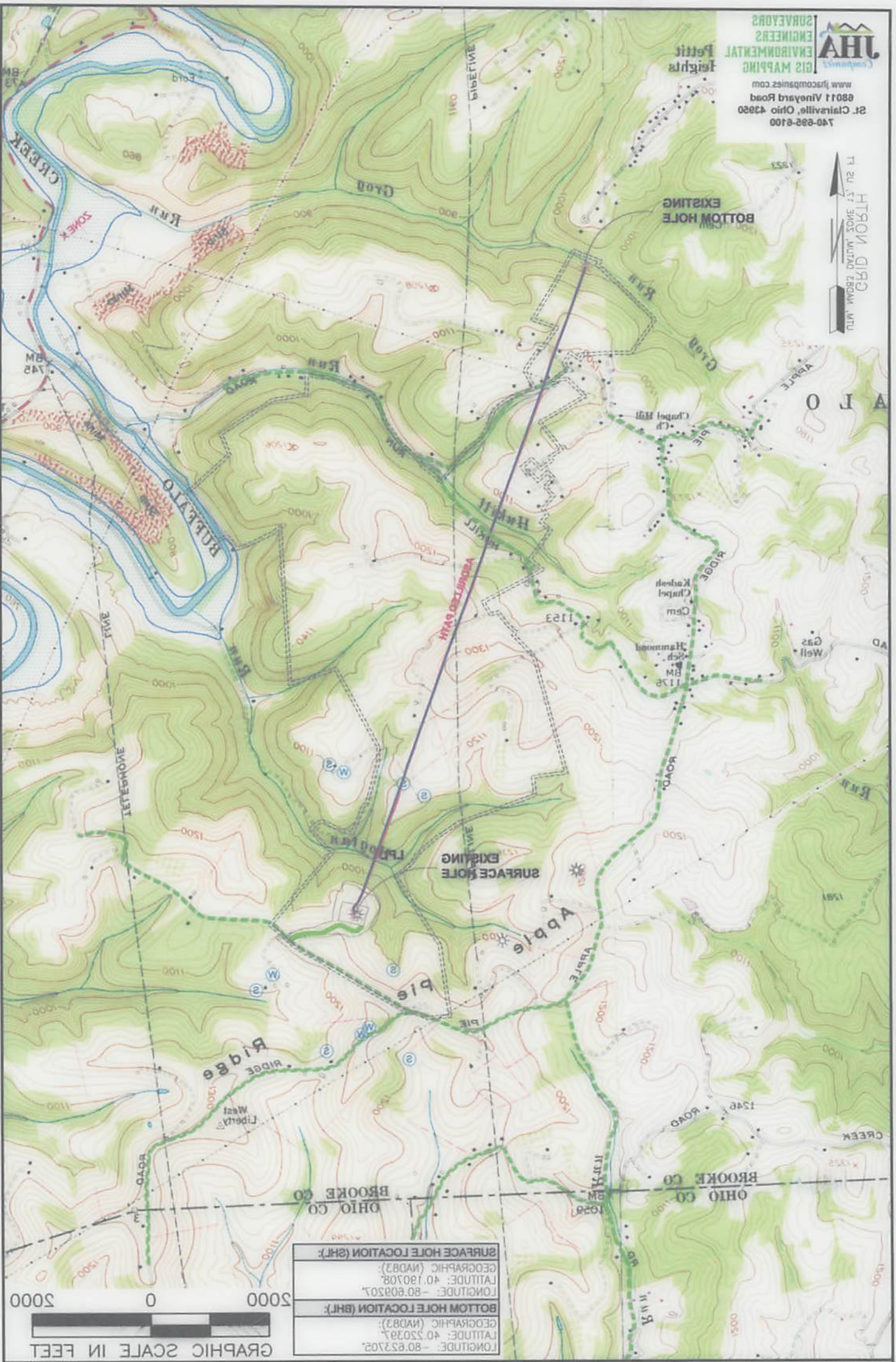
- ACCESS ROAD (Green dashed line)
- PUBLIC ROAD TO PREY. SITE (Black dashed line)
- ACCESS ROAD TO PREY. SITE (Black solid line)
- LEASE BOUNDARY (Red dashed line)
- PROPOSED PATH (Blue solid line)
- ASDRILLED PATH (Red solid line)
- PROPOSED SURFACE HOLE / BOTTOM HOLE (Green dashed line)
- EXISTING / PRODUCING WELLS (Black star symbol)
- LPL * (Red star symbol)
- LANDING POINT LOCATION (Black dot symbol)
- FLOOD PLAN (Blue outline)





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740-992-6100

GRID NORTH
HT 12 11 10 9 8 7 6 5 4 3 2 1
MILE
1/4 1/2 3/4 1 1 1/2 2 3 4 5 6 7 8 9 10 11 12



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.180708
LONGITUDE: -80.808202
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.220327
LONGITUDE: -80.823202

LEGEND:

- PROPOSED SURFACE HOLE \ BOTTOM HOLE
- ⊙ EXISTING \ PRODUCING WELLS
- ✱ L.P.L. LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- - - PUBLIC ROAD
- - - ACCESS ROAD TO PREV. SURVEY SITE
- ===== LEASE BOUNDARY
- PROPOSED PATH
- ADRIELED PATH

WELL OPERATOR: SWM PRODUCTION COMPANY, LLC	
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26328	
SURFACE OWNER: MIKE RYNIWEC	
WELL (FARM) NAME: MIKE RYNIWEC BRK	WELL # 3H
COUNTY - CODE BROOKE - 009	SERIAL # XXXX
DISTRICT: BUFFALO	

NOTES ON SURVEY:

1. SURFACE AND ROVALLY 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 PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DESIGNATED.

THURSDAY OCTOBER 11 2018 11:28AM
R:\PROJECTS\SWM\2017-220 SWM - MIKE RYNIWEC PAD/CADD\PLATS\2H\AS-DRILLED\MIKE RYNIWEC BRK 3H MYLAR.DWG
PROPERTY NUMBER 250116247
PAD ID 200112610