

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

API 47-009-00242 County BROOKE District BUFFALO
Quad BETHANY & TILTONSVILLE Pad Name MIKE RYNIAWEC BRK PAD Field/Pool Name PANHANDLE FIELD WET
Farm name MIKE RYNIAWEC Well Number MIKE RYNIAWEC BRK 1H
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 4448996.62 Easting 533260.79
Landing Point of Curve Northing 4449177.27 Easting 532940.79
Bottom Hole Northing 4452032.91 Easting 531764.90

Elevation (ft) 1147 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 2/12/2018 Date drilling commenced 11/27/2017 Date drilling ceased 03/22/2018
Date completion activities began 6/15/2018 Date completion activities ceased 7/27/2018
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 by:
SB 1.17.19

Reviewed
CSH 1.17.19

API 47-009 - 00242 Farm name MIKE RYNIAWEC Well number MIKE RYNIAWEC BRK 1H

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	417	NEW	J-55/54.50#	253'	Y, 20 BBLs
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1696	NEW	J-55/36#		Y, 30 BBLs
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	16705	NEW	HCP-110/20#		Y
Tubing		2.375	6247	NEW	L-80/4.7#		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	351	15.60	1.20	421.2	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	2,740	15.60	1.19	3,260.6	SURFACE	24
Tubing							

Drillers TD (ft) 16,705 Loggers TD (ft) 16,705
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5,140

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 _____

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Farm name MIKE RYNIAWEC

Well number MIKE RYNIAWEC BRK 1H

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 Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
	SEE	ATTACHMENT	2					

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>5,903</u> TVD	<u>6,247</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2633 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 1,053 mcfpd Oil 336 bpd NGL _____ bpd Water 662 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

Please insert additional pages as applicable.

Drilling Contractor SWN DRILLING COMPANY
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Logging Company WEATHERFORD
Address 2000 ST. JAMES PLACE City HOUSTON State TX Zip 77056

Cementing Company SCHLUMBERGER WELL SERVICES
Address 1080 US-33 City WESTON State WV Zip 26452

Stimulating Company HALLIBURTON ENERGY SERVICES
Address 1628 JACKSON MILL ROAD City JANE LEW State WV Zip 26378

Please insert additional pages as applicable.

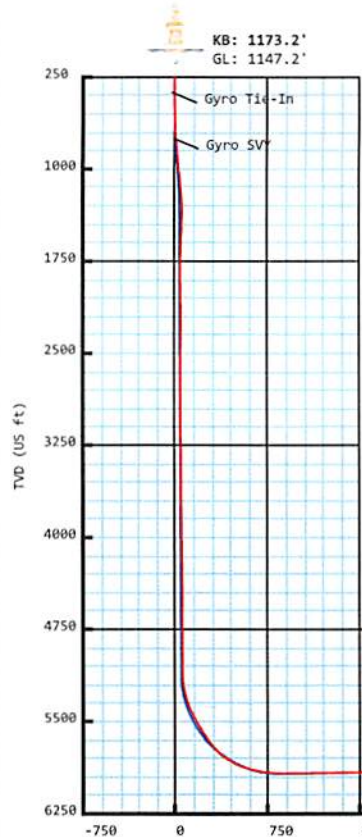
Completed by BOBBY WILLIS Telephone 832-796-2884
Signature _____ Title REGULATORY ANALYST Date 10/18/2018

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry





Mike Ryniawec BRK 1H
 Brooke Co, WV
 SDC 40
 Plan vs Actual



Plan Data for Mike Ryniawec BRK 1H

Plan Point Information:									
Dogleg (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS (DLSU)	Toolface (°)	Comments
0.00	0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	0.0	0.0
26.00	0.00	0.00	26.00	0.00	-0.00	0.00	0.00	0.0	KB Offset
600.00	0.00	0.00	600.00	0.00	-0.00	0.00	0.00	0.0	Nudge KOP
850.00	5.00	330.00	849.68	9.44	-5.45	10.88	2.00	330.0	Hold
910.00	5.00	330.00	909.45	13.97	-8.07	16.10	0.00	0.0	Build/Turn
1404.30	9.00	245.14	1400.99	16.38	-54.03	38.54	2.00	245.2	Hold
5171.10	9.00	245.14	5121.42	-231.36	-588.68	52.16	0.00	0.0	Curve KOP 7° DLS
6172.74	70.00	334.23	5885.13	216.90	-904.85	593.93	7.00	92.4	Build/Turn 9° DLS
6406.77	90.78	337.75	5924.00	426.58	-998.01	823.20	9.00	9.8	Landing Point
16715.44	90.78	337.75	5784.00	9966.73	-4901.18	11106.63	0.00	0.0	PBHL Mike R1H

Target Set Information:
 Name: Mike Ryniawec BRK 1H
 Position offsets from Slot centre

Name	TVD (USft)	+N/-S (USft)	+E/-W (USft)	Northing (USft)	Easting (USft)	Lat (°)	Long (°)
LP Mike R1H	5924.00	255.57	-927.97	14596672.07	1748612.12	40.191413	-80.612575
PBHL Mike R1H	5784.00	9966.73	-4901.18	14606383.23	1744638.91	40.218127	-80.626655

Plan Data for Mike Ryniawec BRK 1H

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 1H
 Position:
 Offset is from Site centre
 +N/-S: 3.36USft Northing: 14596416.50USft Latitude: 40.190700°
 +E/-W: 13.60USft Easting: 1749540.09USft Longitude: -80.609256°
 Elevation Above VRD: 1147.20USft

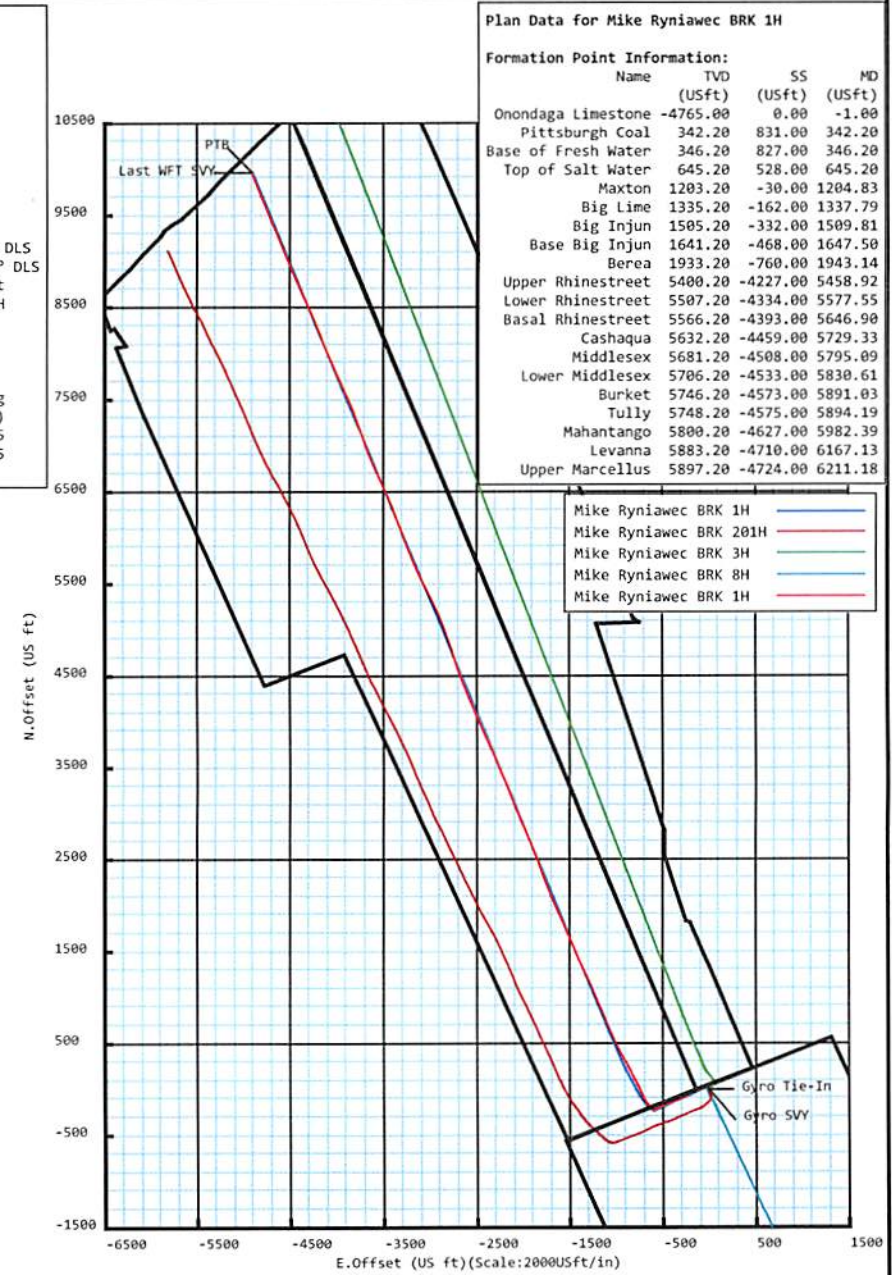
Well: Mike Ryniawec BRK 1H
 Type: Main-Well
 File Number: NE-13033202

Plan Folder: P1 Plan: P1:V2
 Vertical Section: Position offset of origin from Slot centre:
 +N/-S: 0.00USft +E/-W: 0.00USft Azimuth: 333.81°

Magnetic Parameters:
 Field Strength: 52596(nT) Declination: -8.23° Dip: 67.62° Date: 2018-03-05

Grid Convergence: 0.25°
 Mag Declination: -8.23°
 Bearing:
 True = Mag - 8.23°
 Grid = True - 0.25°
 Total Correction to Grid North -8.76°

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Drawing By: Gary Rhodes Date: 5 March 2018
 Office Name: MidCon DS
 Address: 7725 W. Reno Ave, Ste. #220
 Oklahoma City, OK 73127
 Phone: +1.405.728.4257



Weatherford®

Mike Ryniawec BRK 1H

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		
Comment:			
Site: Mike Ryniawec Pad	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	Comment:	
Slot: Mike Ryniawec BRK 1H	Position (Relative to Site Centre)		
	+N/-S: 3.36 US ft	Northing: 14596416.50 US ft	Latitude: 40.190700
	+E/-W: 13.60 US ft	Easting: 1749540.09 US ft	Longitude: -80.609256
	Elevation above Field Reference: 1147.20 US ft	Comment:	
Well: Mike Ryniawec BRK 1H	Type: Main well	UWI:	RECEIVED Office of Oil and Gas OCT 19 2018 WV Department of Environmental Protection
	File Number: NE-13033202	Comment:	
	Closure Distance: 11105 US ft	Closure Azimuth: 333.77°	
	Vertical Section: Position of Origin (Relative to Slot centre)		
	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft	Az: 333.81°

Drill floor: Survey Name: Definitive Survey			
Rig Height (Drill Floor): 26.00 US ft	Elevation above Field Reference: 1173.20 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: HDGM	Date: 05/Mar/2018	Field Strength: 52596.0nT	Declination: -8.23° Dip: 67.62°

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

5D Survey Report

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
GYRO_GC_WIR+DPIPE_GYD	0.00	386.00	Gyro_01
MFAC_US_V2	386.00	716.00	WFT MFAC_01
GYRO_GC_WIR+DPIPE_GYD	716.00	761.00	Gyro_02
MWD	761.00	1635.00	WFT MWD_02
MWD	1635.00	5829.00	WFT MWD_03
MWD	5829.00	6416.00	WFT MWD_04
MWD	6416.00	16705.00	WFT MWD_05

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
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	40.190700	-80.609256	0.00	
50.00	0.29	137.01	50.00	-0.12	-0.09	0.09	40.190700	-80.609255	0.58	
100.00	0.24	164.19	100.00	-0.35	-0.29	0.20	40.190700	-80.609255	0.27	
150.00	0.21	137.37	150.00	-0.54	-0.45	0.29	40.190699	-80.609255	0.22	
200.00	0.27	110.35	200.00	-0.71	-0.56	0.46	40.190699	-80.609254	0.25	
250.00	0.43	116.29	250.00	-0.94	-0.69	0.74	40.190699	-80.609253	0.33	
300.00	0.36	114.69	300.00	-1.21	-0.84	1.05	40.190698	-80.609252	0.14	
350.00	0.07	353.14	350.00	-1.31	-0.87	1.19	40.190698	-80.609252	0.80	
386.00	0.46	276.02	386.00	-1.21	-0.83	1.05	40.190698	-80.609252	1.25	Gyro Tie-In
444.00	0.07	255.12	443.99	-1.08	-0.82	0.78	40.190698	-80.609253	0.68	
535.00	0.80	348.26	534.99	-0.45	-0.21	0.60	40.190700	-80.609254	0.89	
625.00	2.02	338.61	624.96	1.74	1.88	-0.11	40.190706	-80.609256	1.38	
716.00	3.65	346.65	715.85	6.16	6.19	-1.36	40.190717	-80.609261	1.84	
761.00	4.82	340.81	760.73	9.43	9.37	-2.31	40.190726	-80.609264	2.77	Gyro SVY
899.00	6.13	322.65	898.10	22.42	20.71	-8.69	40.190757	-80.609287	1.56	
992.00	6.48	310.45	990.54	32.11	28.06	-15.70	40.190778	-80.609312	1.49	
1084.00	6.90	297.40	1081.92	41.32	33.97	-24.55	40.190794	-80.609343	1.71	
1174.00	7.52	279.02	1171.22	49.07	37.38	-35.17	40.190803	-80.609381	2.64	
1267.00	8.70	264.31	1263.30	55.04	37.64	-48.18	40.190804	-80.609428	2.56	
1360.00	8.13	242.11	1355.32	57.31	33.87	-61.00	40.190794	-80.609474	3.52	
1452.00	9.80	235.07	1446.20	55.92	26.34	-73.17	40.190774	-80.609517	2.17	
1545.00	7.90	220.36	1538.10	52.18	16.93	-83.80	40.190748	-80.609556	3.16	
1635.00	7.28	224.14	1627.31	47.79	8.13	-91.78	40.190724	-80.609584	0.88	
1743.00	5.96	238.25	1734.60	44.95	0.27	-101.31	40.190702	-80.609619	1.93	
1789.00	6.16	238.69	1780.34	44.49	-2.27	-105.45	40.190695	-80.609633	0.45	
1882.00	8.64	249.70	1872.56	44.76	-7.29	-116.27	40.190682	-80.609672	3.06	
1975.00	9.55	249.45	1964.39	46.24	-12.42	-130.04	40.190668	-80.609722	0.98	
2067.00	10.85	248.60	2054.94	47.71	-18.26	-145.25	40.190652	-80.609776	1.42	
2160.00	11.54	245.72	2146.17	48.75	-25.28	-161.88	40.190633	-80.609836	0.95	
2253.00	11.17	243.55	2237.35	49.02	-33.12	-178.42	40.190612	-80.609895	0.61	
2345.00	10.62	242.83	2327.69	48.83	-40.96	-193.95	40.190590	-80.609951	0.62	
2438.00	10.09	242.49	2419.17	48.50	-48.63	-208.79	40.190569	-80.610004	0.57	
2531.00	9.63	243.17	2510.80	48.22	-55.91	-222.96	40.190550	-80.610055	0.51	
2624.00	9.19	243.06	2602.55	48.04	-62.78	-236.52	40.190531	-80.610104	0.47	
2716.00	8.93	242.03	2693.40	47.72	-69.46	-249.38	40.190513	-80.610150	0.33	
2809.00	8.76	239.61	2785.29	46.97	-76.43	-261.86	40.190494	-80.610195	0.44	
2902.00	8.11	242.65	2877.29	46.32	-83.02	-273.80	40.190476	-80.610237	0.85	
2995.00	7.32	248.16	2969.45	46.64	-88.24	-285.13	40.190462	-80.610278	1.16	
3087.00	7.48	247.12	3060.68	47.43	-92.75	-296.08	40.190449	-80.610317	0.23	
3180.00	8.11	246.49	3152.82	48.08	-97.72	-307.68	40.190436	-80.610359	0.68	
3273.00	8.34	245.25	3244.86	48.56	-103.16	-319.82	40.190421	-80.610403	0.31	
3365.00	8.89	243.47	3335.83	48.68	-109.13	-332.24	40.190405	-80.610447	0.66	
3458.00	9.00	244.06	3427.69	48.67	-115.52	-345.21	40.190387	-80.610494	0.15	
3551.00	9.46	246.58	3519.49	49.07	-121.74	-358.76	40.190370	-80.610542	0.66	
3644.00	8.87	245.63	3611.30	49.66	-127.74	-372.30	40.190354	-80.610591	0.65	
3737.00	8.94	246.69	3703.18	50.25	-133.56	-385.47	40.190338	-80.610638	0.19	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
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
3829.00	9.88	249.29	3793.94	51.37	-139.18	-399.42	40.190323	-80.610688	1.12	
3922.00	9.34	247.93	3885.64	52.67	-144.83	-413.88	40.190308	-80.610740	0.63	
4015.00	8.63	246.39	3977.50	53.52	-150.46	-427.26	40.190292	-80.610788	0.81	
4107.00	9.26	247.74	4068.38	54.34	-156.03	-440.44	40.190277	-80.610835	0.72	
4200.00	10.49	250.43	4160.00	55.83	-161.70	-455.34	40.190262	-80.610889	1.41	
4293.00	10.12	248.90	4251.50	57.53	-167.48	-470.94	40.190246	-80.610945	0.49	
4386.00	9.57	246.62	4343.13	58.63	-173.49	-485.66	40.190230	-80.610997	0.72	
4479.00	9.35	244.41	4434.86	59.09	-179.82	-499.57	40.190213	-80.611047	0.46	
4571.00	9.20	241.31	4525.66	58.85	-186.58	-512.76	40.190194	-80.611095	0.57	
4664.00	8.89	242.90	4617.51	58.41	-193.42	-525.68	40.190176	-80.611141	0.43	
4757.00	8.86	246.75	4709.39	58.66	-199.52	-538.66	40.190159	-80.611188	0.64	
4849.00	8.77	244.68	4800.31	59.13	-205.32	-551.51	40.190143	-80.611234	0.36	
4942.00	8.82	242.94	4892.21	59.13	-211.59	-564.27	40.190126	-80.611280	0.29	
5035.00	8.59	242.85	4984.14	58.90	-218.01	-576.80	40.190109	-80.611325	0.25	
5128.00	7.71	244.32	5076.20	58.84	-223.88	-588.60	40.190093	-80.611367	0.97	
5174.00	8.03	264.12	5121.78	59.98	-225.55	-594.58	40.190088	-80.611388	5.90	
5221.00	9.67	283.42	5168.23	63.64	-224.97	-601.68	40.190090	-80.611414	7.17	
5267.00	12.04	296.29	5213.41	69.91	-221.94	-609.75	40.190098	-80.611443	7.34	
5313.00	14.87	303.73	5258.14	78.82	-216.54	-618.96	40.190113	-80.611475	7.20	
5360.00	17.20	311.39	5303.32	90.47	-208.59	-629.19	40.190135	-80.611512	6.69	
5406.00	19.96	316.22	5346.92	104.24	-198.43	-639.73	40.190163	-80.611550	6.86	
5453.00	23.41	319.61	5390.59	120.94	-185.52	-651.33	40.190199	-80.611591	7.81	
5499.00	26.06	321.61	5432.36	139.68	-170.64	-663.53	40.190240	-80.611634	6.04	
5545.00	28.05	323.97	5473.33	160.22	-153.97	-676.17	40.190286	-80.611679	4.91	
5592.00	29.49	326.97	5514.53	182.59	-135.33	-688.98	40.190337	-80.611725	4.34	
5647.00	31.18	332.38	5562.00	210.28	-111.36	-702.96	40.190403	-80.611775	5.84	
5693.00	32.50	336.98	5601.09	234.52	-89.43	-713.31	40.190463	-80.611811	6.00	
5736.00	35.26	337.42	5636.78	258.45	-67.33	-722.60	40.190524	-80.611844	6.44	
5783.00	38.73	336.64	5674.32	286.68	-41.30	-733.64	40.190596	-80.611883	7.45	
5829.00	41.38	335.53	5709.52	316.26	-14.25	-745.65	40.190670	-80.611926	5.97	
5863.00	43.20	336.57	5734.67	339.12	6.66	-754.93	40.190728	-80.611959	5.73	
5909.00	48.65	335.01	5766.66	372.13	36.78	-768.50	40.190811	-80.612007	12.10	
5955.00	54.04	331.95	5795.39	408.03	68.89	-784.56	40.190899	-80.612064	12.81	
6002.00	58.53	331.83	5821.47	447.09	103.36	-802.97	40.190994	-80.612129	9.56	
6048.00	62.64	333.24	5844.06	487.14	138.91	-821.44	40.191092	-80.612195	9.32	
6095.00	67.86	334.23	5863.73	529.81	177.18	-840.32	40.191197	-80.612262	11.27	
6141.00	73.23	333.79	5879.04	573.17	216.15	-859.32	40.191304	-80.612329	11.71	
6187.00	77.12	331.32	5890.81	617.61	255.60	-879.82	40.191413	-80.612402	9.92	
6234.00	79.02	330.26	5900.53	663.53	295.73	-902.26	40.191523	-80.612482	4.61	
6280.00	80.27	330.00	5908.79	708.69	334.97	-924.79	40.191631	-80.612562	2.77	
6323.00	82.08	331.39	5915.39	751.11	372.02	-945.59	40.191733	-80.612636	5.28	
6370.00	85.55	334.34	5920.46	797.82	413.60	-966.89	40.191848	-80.612711	9.67	
6416.00	88.52	334.88	5922.83	843.75	455.09	-986.59	40.191962	-80.612781	6.56	
6475.00	89.45	334.54	5923.88	902.73	508.43	-1011.79	40.192109	-80.612871	1.68	
6568.00	90.00	336.23	5924.33	995.69	592.97	-1050.52	40.192341	-80.613008	1.91	
6658.00	90.31	336.63	5924.08	1085.60	675.46	-1086.51	40.192568	-80.613136	0.56	
6751.00	91.35	337.57	5922.74	1178.43	761.12	-1122.69	40.192804	-80.613264	1.51	
6843.00	91.05	338.35	5920.81	1270.17	846.38	-1157.21	40.193039	-80.613386	0.91	
6936.00	91.11	337.36	5919.06	1362.92	932.50	-1192.26	40.193275	-80.613510	1.07	
7026.00	91.11	336.72	5917.31	1452.76	1015.36	-1227.36	40.193503	-80.613635	0.71	
7119.00	90.99	335.92	5915.61	1545.66	1100.51	-1264.70	40.193738	-80.613767	0.87	
7211.00	90.92	335.78	5914.07	1637.59	1184.45	-1302.34	40.193969	-80.613901	0.17	
7304.00	91.05	335.71	5912.48	1730.52	1269.23	-1340.54	40.194202	-80.614036	0.16	
7397.00	91.17	336.64	5910.67	1823.42	1354.28	-1378.10	40.194436	-80.614169	1.01	
7490.00	91.36	336.97	5908.62	1916.27	1439.75	-1414.72	40.194671	-80.614299	0.41	
7582.00	91.29	337.32	5906.49	2008.09	1524.50	-1450.44	40.194904	-80.614426	0.39	
7675.00	91.05	337.49	5904.59	2100.89	1610.34	-1486.16	40.195140	-80.614552	0.32	
7768.00	90.80	336.47	5903.09	2193.74	1695.93	-1522.53	40.195376	-80.614681	1.13	
7861.00	91.11	335.96	5901.54	2286.64	1781.02	-1560.03	40.195610	-80.614814	0.64	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
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
7953.00	90.86	336.14	5899.96	2378.56	1865.08	-1597.37	40.195841	-80.614946	0.33	
8046.00	90.55	336.14	5898.82	2471.47	1950.13	-1634.98	40.196075	-80.615080	0.33	
8139.00	90.93	336.14	5897.62	2564.39	2035.17	-1672.60	40.196309	-80.615213	0.41	
8232.00	90.86	337.72	5896.16	2657.24	2120.72	-1709.04	40.196544	-80.615342	1.70	
8324.00	90.99	338.59	5894.68	2748.96	2206.10	-1743.27	40.196779	-80.615464	0.96	
8417.00	90.55	339.65	5893.43	2841.55	2292.99	-1776.41	40.197018	-80.615581	1.23	
8510.00	90.68	340.46	5892.43	2934.00	2380.40	-1808.13	40.197259	-80.615693	0.88	
8603.00	90.43	339.56	5891.53	3026.45	2467.79	-1839.92	40.197499	-80.615806	1.00	
8695.00	90.49	338.69	5890.79	3118.05	2553.75	-1872.70	40.197736	-80.615922	0.95	
8785.00	90.80	338.84	5889.78	3207.71	2637.64	-1905.30	40.197966	-80.616037	0.38	
8878.00	90.43	337.66	5888.78	3300.42	2724.01	-1939.76	40.198204	-80.616159	1.33	
8971.00	90.68	336.47	5887.88	3393.26	2809.65	-1975.99	40.198439	-80.616288	1.31	
9063.00	90.68	336.86	5886.79	3485.14	2894.12	-2012.43	40.198672	-80.616417	0.42	
9156.00	90.99	337.53	5885.43	3577.97	2979.84	-2048.48	40.198908	-80.616545	0.79	
9249.00	90.80	337.86	5883.98	3670.75	3065.87	-2083.77	40.199144	-80.616670	0.41	
9342.00	90.74	338.06	5882.73	3763.50	3152.07	-2118.66	40.199381	-80.616793	0.22	
9435.00	90.86	338.34	5881.43	3856.21	3238.41	-2153.20	40.199619	-80.616916	0.33	
9527.00	90.92	338.27	5880.00	3947.92	3323.88	-2187.20	40.199854	-80.617036	0.10	
9620.00	90.74	337.78	5878.65	4040.66	3410.11	-2222.00	40.200091	-80.617159	0.56	
9713.00	90.99	337.07	5877.25	4133.46	3495.98	-2257.70	40.200327	-80.617286	0.81	
9806.00	90.86	337.56	5875.75	4226.28	3581.77	-2293.56	40.200564	-80.617413	0.55	
9898.00	91.11	336.87	5874.17	4318.10	3666.58	-2329.18	40.200797	-80.617539	0.80	
9991.00	90.62	335.95	5872.76	4410.99	3751.80	-2366.40	40.201031	-80.617671	1.12	
10084.00	90.80	335.72	5871.61	4503.93	3836.64	-2404.46	40.201265	-80.617806	0.31	
10176.00	90.55	336.17	5870.53	4595.86	3920.64	-2441.96	40.201496	-80.617939	0.56	
10269.00	90.71	336.71	5869.50	4688.76	4005.89	-2479.13	40.201730	-80.618071	0.61	
10362.00	90.62	337.15	5868.43	4781.61	4091.44	-2515.57	40.201966	-80.618200	0.48	
10454.00	90.62	336.84	5867.43	4873.46	4176.12	-2551.53	40.202199	-80.618328	0.34	
10547.00	90.55	338.24	5866.48	4966.26	4262.06	-2587.05	40.202435	-80.618454	1.51	
10640.00	90.55	338.93	5865.59	5058.93	4348.64	-2621.01	40.202673	-80.618574	0.74	
10733.00	90.62	338.85	5864.64	5151.56	4435.39	-2654.50	40.202912	-80.618692	0.11	
10825.00	90.43	340.38	5863.79	5243.09	4521.62	-2686.54	40.203149	-80.618806	1.68	
10918.00	90.74	341.76	5862.85	5335.33	4609.59	-2716.71	40.203391	-80.618913	1.52	
11011.00	90.43	342.89	5861.90	5427.30	4698.19	-2744.95	40.203635	-80.619012	1.26	
11104.00	90.49	341.18	5861.15	5519.34	4786.65	-2773.63	40.203878	-80.619114	1.84	
11196.00	90.92	340.75	5860.02	5610.62	4873.61	-2803.63	40.204117	-80.619220	0.66	
11289.00	90.86	340.93	5858.57	5702.91	4961.45	-2834.15	40.204359	-80.619328	0.20	
11382.00	90.86	339.26	5857.18	5795.34	5048.88	-2865.81	40.204599	-80.619440	1.80	
11475.00	90.62	336.98	5855.98	5888.06	5135.17	-2900.46	40.204836	-80.619563	2.46	
11568.00	91.11	334.66	5854.57	5980.99	5219.99	-2938.55	40.205070	-80.619698	2.55	
11660.00	91.32	333.89	5852.62	6072.96	5302.85	-2978.47	40.205298	-80.619839	0.87	
11753.00	91.23	334.55	5850.55	6165.94	5386.58	-3018.91	40.205528	-80.619983	0.72	
11843.00	91.41	334.60	5848.48	6255.90	5467.84	-3057.54	40.205752	-80.620120	0.21	
11936.00	91.54	334.78	5846.08	6348.86	5551.88	-3097.28	40.205983	-80.620261	0.24	
12026.00	91.11	335.37	5844.00	6438.82	5633.48	-3135.20	40.206207	-80.620396	0.81	
12118.00	91.17	336.58	5842.17	6530.73	5717.49	-3172.65	40.206439	-80.620528	1.32	
12208.00	91.05	338.21	5840.43	6620.53	5800.56	-3207.24	40.206667	-80.620651	1.82	
12301.00	90.80	338.50	5838.93	6713.23	5886.99	-3241.54	40.206905	-80.620773	0.41	
12393.00	90.93	339.16	5837.54	6804.87	5972.77	-3274.76	40.207141	-80.620890	0.73	
12486.00	90.74	339.24	5836.18	6897.45	6059.70	-3307.78	40.207380	-80.621007	0.22	
12579.00	90.62	340.17	5835.08	6989.95	6146.92	-3340.03	40.207620	-80.621121	1.01	
12672.00	90.12	339.53	5834.48	7082.43	6234.22	-3372.07	40.207860	-80.621235	0.87	
12764.00	90.37	337.93	5834.09	7174.09	6319.95	-3405.44	40.208096	-80.621353	1.76	
12857.00	90.62	337.97	5833.28	7266.84	6406.15	-3440.35	40.208333	-80.621477	0.27	
12950.00	90.62	336.17	5832.28	7359.68	6491.79	-3476.58	40.208568	-80.621605	1.94	
13043.00	90.68	335.44	5831.22	7452.62	6576.62	-3514.70	40.208802	-80.621740	0.79	
13136.00	90.43	335.03	5830.32	7545.59	6661.06	-3553.65	40.209034	-80.621879	0.52	
13228.00	90.92	335.20	5829.24	7637.56	6744.51	-3592.36	40.209264	-80.622016	0.56	
13321.00	90.79	337.95	5827.85	7730.43	6829.83	-3629.33	40.209499	-80.622147	2.96	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
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
13414.00	90.49	339.59	5826.81	7823.07	6916.51	-3663.00	40.209737	-80.622266	1.79	
13507.00	90.25	340.39	5826.21	7915.53	7003.89	-3694.82	40.209977	-80.622379	0.90	
13599.00	90.55	339.95	5825.57	8006.96	7090.43	-3726.03	40.210215	-80.622490	0.58	
13692.00	90.92	340.51	5824.37	8099.37	7177.94	-3757.48	40.210456	-80.622601	0.72	
13785.00	91.11	341.12	5822.73	8191.66	7265.76	-3788.04	40.210697	-80.622709	0.69	
13878.00	91.23	339.43	5820.83	8284.05	7353.29	-3819.42	40.210938	-80.622820	1.82	
13970.00	90.62	337.78	5819.34	8375.71	7438.93	-3852.98	40.211174	-80.622939	1.91	
14063.00	90.79	336.71	5818.20	8468.54	7524.69	-3888.94	40.211410	-80.623066	1.16	
14156.00	90.71	335.48	5816.98	8561.45	7609.70	-3926.63	40.211644	-80.623200	1.33	
14245.00	90.80	336.12	5815.81	8650.39	7690.87	-3963.11	40.211867	-80.623330	0.73	
14335.00	90.71	336.36	5814.62	8740.30	7773.23	-3999.36	40.212093	-80.623458	0.28	
14428.00	91.11	336.05	5813.14	8833.21	7858.32	-4036.88	40.212328	-80.623591	0.54	
14521.00	90.88	337.24	5811.53	8926.08	7943.68	-4073.74	40.212562	-80.623722	1.30	
14610.00	91.11	337.97	5809.98	9014.87	8025.96	-4107.65	40.212789	-80.623842	0.86	
14703.00	90.49	339.28	5808.68	9107.53	8112.55	-4141.54	40.213027	-80.623962	1.56	
14796.00	90.92	339.13	5807.54	9200.12	8199.49	-4174.55	40.213266	-80.624079	0.49	
14889.00	90.99	337.99	5805.99	9292.78	8286.04	-4208.54	40.213504	-80.624200	1.23	
14981.00	90.92	336.27	5804.46	9384.61	8370.79	-4244.29	40.213737	-80.624326	1.87	
15074.00	90.37	336.47	5803.41	9477.51	8455.99	-4281.56	40.213972	-80.624459	0.63	
15167.00	90.80	335.17	5802.46	9570.45	8540.82	-4319.65	40.214205	-80.624594	1.47	
15260.00	90.55	336.10	5801.36	9663.39	8625.53	-4358.02	40.214438	-80.624730	1.04	
15349.00	90.62	336.81	5800.46	9752.29	8707.12	-4393.57	40.214663	-80.624856	0.80	
15442.00	90.62	336.44	5799.45	9845.18	8792.48	-4430.46	40.214897	-80.624987	0.40	
15535.00	90.68	336.84	5798.39	9938.06	8877.85	-4467.34	40.215132	-80.625118	0.43	
15628.00	90.49	337.47	5797.45	10030.89	8963.55	-4503.44	40.215368	-80.625246	0.71	
15721.00	90.68	337.83	5796.50	10123.68	9049.56	-4538.80	40.215605	-80.625371	0.44	
15813.00	90.43	337.84	5795.60	10215.45	9134.76	-4573.51	40.215839	-80.625494	0.27	
15906.00	90.31	337.92	5795.00	10308.21	9220.91	-4608.53	40.216076	-80.625618	0.16	
15996.00	90.35	337.06	5794.49	10398.03	9304.05	-4642.98	40.216305	-80.625740	0.96	
16088.00	90.49	337.08	5793.81	10489.88	9388.78	-4678.83	40.216538	-80.625867	0.15	
16181.00	90.43	337.17	5793.06	10582.72	9474.46	-4714.98	40.216773	-80.625996	0.12	
16274.00	90.55	337.64	5792.27	10675.53	9560.32	-4750.71	40.217010	-80.626122	0.52	
16367.00	90.43	337.53	5791.47	10768.33	9646.29	-4786.17	40.217246	-80.626248	0.18	
16460.00	89.94	338.64	5791.17	10861.07	9732.57	-4820.88	40.217483	-80.626371	1.30	
16552.00	90.19	339.17	5791.07	10952.70	9818.40	-4853.99	40.217719	-80.626488	0.64	
16645.00	89.75	339.21	5791.12	11045.29	9905.33	-4887.03	40.217959	-80.626605	0.48	
16682.00	89.88	339.62	5791.24	11082.12	9939.97	-4900.04	40.218054	-80.626652	1.16	Last WFT SVY
16705.00	89.88	339.62	5791.29	11105.00	9961.53	-4908.05	40.218113	-80.626680	0.00	PTB

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/16/2018
Job End Date:	7/15/2018
State:	West Virginia
County:	Brooke
API Number:	47-009-00242-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Mike Ryniawec Brk 1H
Latitude:	40.19070037
Longitude:	-80.60925575
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,854
Total Base Water Volume (gal):	19,820,472
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	81.62694	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.87865	

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SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
SCAL16486A	NALCO	Scale Inhibitor					
				Listed Below			
EXCELERATE LX-1	Halliburton	Friction Reducer					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			
BIOC11219A	NALCO	Biocide					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	17.43874	
			Hydrochloric acid	7647-01-0	15.00000	0.12532	

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			Polyacrylate	Proprietary	30.00000	0.02160	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02160	
			Fatty acid ester	Proprietary	5.00000	0.00720	
			Ethylene Glycol	107-21-1	30.00000	0.00644	
			Amine Triphosphate	Proprietary	30.00000	0.00644	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Ethoxylated fatty acid	Proprietary	5.00000	0.00360	
			Ammonium chloride	12125-02-9	5.00000	0.00360	
			Sodium chloride	7647-14-5	5.00000	0.00360	
			Methanol	67-56-1	60.00000	0.00286	
			Benzyl-(C12-C16 Alkyl)- Dimethyl-Ammonium Chloride	68424-85-1	30.00000	0.00143	
			Non-hazardous food substance	Proprietary	100.00000	0.00064	
			Glutaraldehyde	111-30-8	10.00000	0.00048	

* 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 1H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	5/24/2018	16,616	16,523	36
2	6/16/2018	16,488	16,381	42
3	6/16/2018	16,348	16,241	42
4	6/17/2018	16,208	16,101	42
5	6/17/2018	16,068	15,961	42
6	6/18/2018	15,948	15,820	40
7	6/18/2018	15,808	15,680	40
8	6/19/2018	15,668	15,540	40
9	6/19/2018	15,528	15,400	40
10	6/19/2018	15,388	15,260	40
11	6/20/2018	15,248	15,120	40
12	6/20/2018	15,108	14,980	40
13	6/21/2018	14,968	14,840	40
14	6/21/2018	14,828	14,700	40
15	6/22/2018	14,688	14,560	40
16	6/22/2018	14,548	14,420	40
17	6/22/2018	14,408	14,280	40
18	6/23/2018	14,268	14,140	40
19	6/23/2018	14,128	14,000	40
20	6/23/2018	13,988	13,860	40
21	6/24/2018	13,848	13,720	40
22	6/24/2018	13,708	13,580	40
23	6/24/2018	13,566	13,440	40
24	6/25/2018	13,428	13,300	40
25	6/25/2018	13,288	13,174	36
26	6/25/2018	13,157	13,020	40
27	6/26/2018	13,008	12,880	40
28	6/26/2018	12,868	12,740	40
29	6/26/2018	12,728	12,600	40
30	6/27/2018	12,588	12,460	40
31	6/27/2018	12,448	12,320	40
32	6/28/2018	12,308	12,180	40
33	6/29/2018	12,168	12,040	40
34	6/29/2018	12,028	11,900	40
35	6/29/2018	11,888	11,760	40
36	6/30/2018	11,748	11,620	40
37	6/30/2018	11,608	11,480	40
38	7/1/2018	11,468	11,340	40
39	7/1/2018	11,328	11,200	40
40	7/1/2018	11,188	11,060	40
41	7/1/2018	11,048	10,920	40
42	7/2/2018	10,908	10,780	40
43	7/2/2018	10,768	10,640	40

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**MIKE RYNIAWEC BRK 1H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
44	7/3/2018	10,628	10,500	40
45	7/3/2018	10,488	10,360	40
46	7/4/2018	10,348	10,222	40
47	7/4/2018	10,208	10,080	40
48	7/4/2018	10,068	9,940	40
49	7/4/2018	9,928	9,800	40
50	7/5/2018	9,788	9,660	40
51	7/6/2018	9,648	9,520	40
52	7/6/2018	9,508	9,380	40
53	7/7/2018	9,368	9,240	40
54	7/7/2018	9,228	9,100	40
55	7/8/2018	9,088	8,960	40
56	7/8/2018	8,948	8,820	40
57	7/8/2018	8,808	8,680	40
58	7/9/2018	8,668	8,540	40
59	7/9/2018	8,528	8,400	40
60	7/9/2018	8,388	8,260	40
61	7/10/2018	8,248	8,120	40
62	7/10/2018	8,108	7,980	40
63	7/10/2018	7,968	7,840	40
64	7/10/2018	7,828	7,700	40
65	7/11/2018	7,688	7,560	40

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MIKE RYNIAWEC BRK 1H

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	91	7,787	7,977	3,804	272,780	5,174	0
2	6/16/2018	88	7,614	8,970	3,771	495,640	8,188	0
3	6/16/2018	95	7,872	5,425	4,308	491,320	7,659	0
4	6/17/2018	62	7,601	5,450	4,214	36,720	5,936	0
5	6/17/2018	69	7,154	5,306	4,164	474,450	8,101	0
6	6/18/2018	95	7,493	5,468	4,091	495,560	7,706	0
7	6/18/2018	98	7,684	5,238	4,191	493,340	7,331	0
8	6/19/2018	94	7,504	5,070	4,139	503,580	8,534	0
9	6/19/2018	100	7,757	5,198	4,332	499,920	7,294	0
10	6/20/2018	96	7,767	4,867	4,125	490,320	7,872	0
11	6/20/2018	92	7,791	5,193	4,323	508,940	7,313	0
12	6/20/2018	98	7,956	4,862	4,259	491,540	7,342	0
13	6/21/2018	95	7,928	3,621	4,174	499,620	8,168	0
14	6/21/2018	97	7,780	4,875	4,395	481,070	7,105	0
15	6/22/2018	100	7,993	5,325	4,278	482,020	7,251	0
16	6/22/2018	100	7,864	5,195	4,446	488,370	6,591	0
17	6/23/2018	100	7,842	5,440	4,466	481,410	6,628	0
18	6/23/2018	99	7,665	5,215	4,159	497,230	7,447	0
19	6/23/2018	100	7,600	5,165	4,544	480,350	6,735	0
20	6/24/2018	100	8,245	5,580	4,243	496,780	6,353	0
21	6/24/2018	99	7,437	5,305	4,320	479,040	6,586	0
22	6/24/2018	100	7,550	5,138	4,558	496,200	5,768	0
23	6/24/2018	100	7,774	5,653	4,164	497,460	6,387	0
24	6/25/2018	100	7,283	4,779	4,404	481,120	7,128	0
25	6/25/2018	100	7,379	4,519	4,056	471,900	7,921	0
26	6/25/2018	101	7,280	5,263	4,238	496,720	6,268	0
27	6/26/2018	100	7,515	5,409	4,347	498,800	5,558	0
28	6/26/2018	99	7,455	4,859	4,186	490,100	6,011	0
29	6/26/2018	96	7,475	5,354	4,386	496,040	6,374	0
30	6/27/2018	97.2	7,921	5,037	4,509	473,900	6,430	0
31	6/28/2018	99.9	7,309	5,072	4,257	498,160	5,779	0
32	6/28/2018	99.2	7,529	5,392	4,699	491,420	9,749	0
33	6/29/2018	100	7,379	5,262	4,191	494,060	6,845	0
34	6/29/2018	99.6	7,450	5,425	4,673	481,320	5,462	0
35	6/30/2018	99.7	7,147	5,598	4,348	497,540	8,063	0
36	6/30/2018	102	7,164	4,209	4,196	484,640	6,132	0
37	6/30/2018	100.3	7,568	5,734	4,654	489,760	5,381	0
38	7/1/2018	100.1	6,978	5,402	4,227	497,000	5,568	0
39	7/1/2018	99.5	7,130	5,385	4,217	494,820	6,504	0
40	7/1/2018	100.1	7,211	4,758	4,364	479,960	5,284	0
41	7/2/2018	99.8	7,203	5,272	4,548	491,360	5,324	0
42	7/2/2018	96.7	6,852	5,090	4,484	465,030	6,091	0
43	7/3/2018	100.2	7,262	4,765	4,259	499,265	6,456	0
44	7/3/2018	100.2	7,192	4,941	4,474	497,640	6,297	0
45	7/3/2018	99.9	7,266	4,975	4,459	491,120	5,336	0
46	7/4/2018	100.4	6,709	5,240	4,598	498,060	6,788	0
47	7/4/2018	100.6	6,964	4,522	4,350	495,920	6,086	0
48	7/4/2018	100	6,866	4,109	4,503	498,520	6,345	0
49	7/5/2018	100.6	6,950	5,260	4,283	499,660	6,253	0
50	7/6/2018	100	7,031	5,147	4,532	488,660	6,312	0
51	7/6/2018	100.4	7,091	5,388	4,586	489,440	5,994	0
52	7/7/2018	100.3	6,646	5,029	4,370	491,960	6,063	0
53	7/7/2018	100.4	6,894	4,949	4,418	489,820	6,069	0

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MIKE RYNIAWEC BRK 1H

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	6,540	5,053	4,540	496,220	5,791	0
55	7/8/2018	100.8	6,851	5,476	4,534	491,940	6,388	0
56	7/8/2018	99.8	6,645	5,240	4,486	492,520	5,800	0
57	7/9/2018	100.3	6,744	5,336	4,373	504,700	5,695	0
58	7/9/2018	100	7,013	5,137	4,210	494,660	5,897	0
59	7/9/2018	99.5	6,510	5,138	4,557	499,200	5,717	0
60	7/10/2018	100.6	6,588	5,332	4,678	491,260	5,551	0
61	7/10/2018	97.7	6,638	4,791	4,611	497,840	5,941	0
62	7/10/2018	100.9	6,530	5,149	4,661	495,160	5,628	0
63	7/10/2018	99.7	6,451	5,199	4,705	490,320	5,270	0
64	7/11/2018	72.9	7,926	5,126	4,278	487,300	10,358	0
65	7/11/2018	99.8	6,384	5,043	4,468	487,420	5,508	0

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Well Name:

MIKE RYNIAWEC BRK 1H

47009002420000

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)	5768.00	5663.00	5857.00	5730.00	
Burket (shale)	5857.00	5730.00	5776.00	5744.00	
Tully (ls)	5776.00	5744.00	5961.00	5799.00	
Mahantango (shale)	5961.00	5799.00	6247.00	5903.00	
Marcellus (shale)	6247.00	5903.00	NA	NA	GAS

LEGEND:
 ○ PROPOSED SURFACE HOLE / BOTTOM HOLE
 * EXISTING / PRODUCING WELLS
 * LANDING POINT LOCATION
 * EXISTING WATER WELL
 * EXISTING SPRING
 --- SURVEYED BOUNDARY
 - - - - - LEASE BOUNDARY
 --- AS-DRILLED PATH
 --- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
ADDRESS: P.O. BOX 1300
CITY: JAME LEW **STATE:** WV **ZIP CODE:** 26378
DESIGNATED AGENT: BRITANY WOODY
DATE: 10-10-2018
REVISIONS:

WELL LOCATION PLAT
DRAWING NO: 2017-220
SCALE: 1" = 200'
DRAWN BY: D. REED

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

WATERSHED: UPPER OHIO SOUTH
DISTRICT: BUFFALO
SURFACE OWNER: MIKE RYNAWEC
OIL & GAS ROYALTY OWNER: MIKE RYNAWEC
DRILL DEEPER: REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT: PLUG & ABANDON CLEAN OUT & REFLUG OTHER CHANGE (SPECIFY) AS-DRILLED

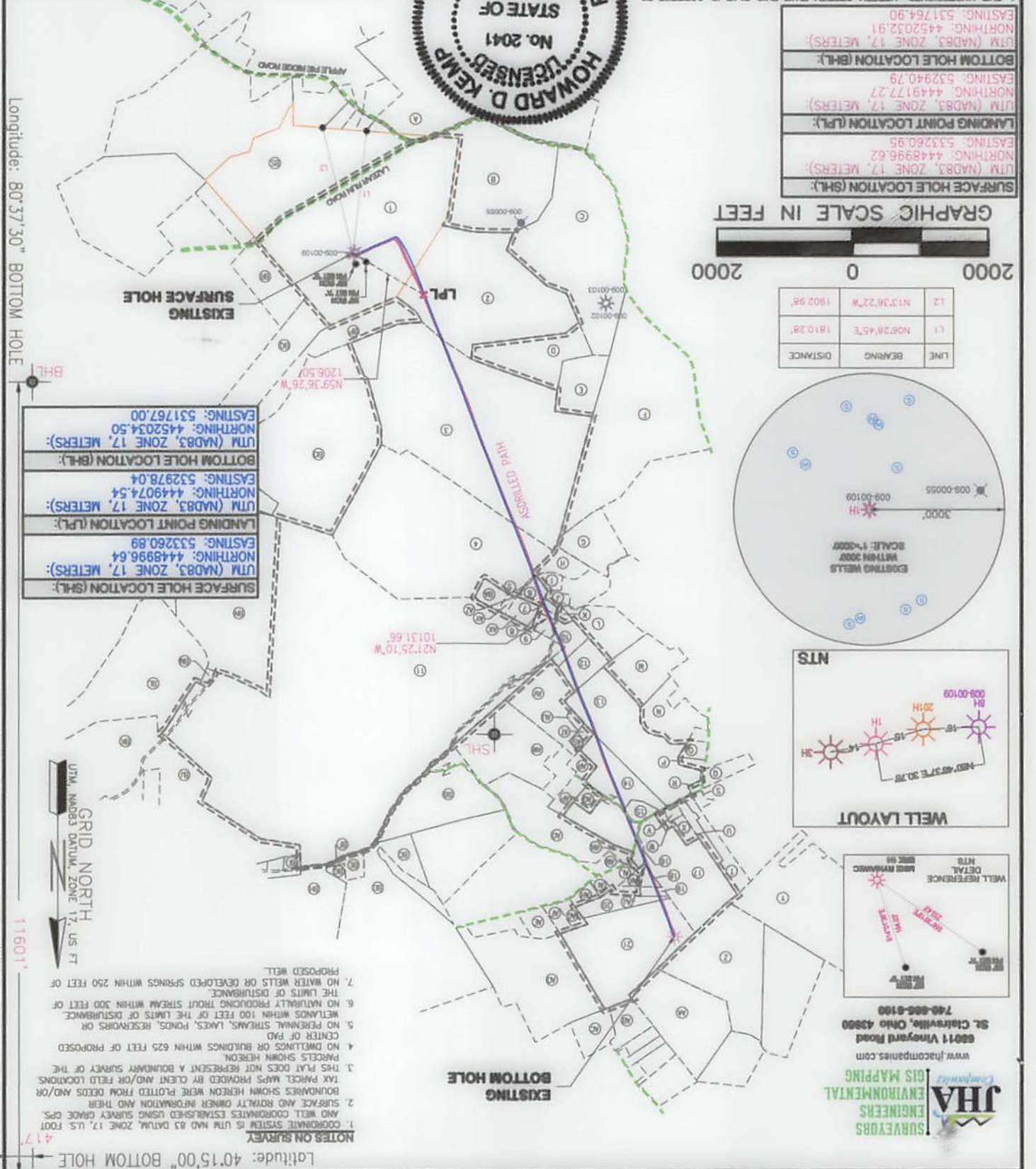
TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: 5,921' TWD 16,705.0' TMD

WELL LOCATION OF WELL ON MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF GRADE GPS:
ELEVATION: (NAVD 88, US FT)
OFFICE OF OIL & GAS: CHARLESTON, WV 25034
WVDP: 601 57TH STREET
UNITED STATES TOPOGRAPHIC MAPS:

AP# WELL #: 47
STATE: WV
COUNTY: BRK
PERMIT: 009 00242

OPERATOR'S WELL #: MIKE RYNAWEC 1H

COMPANY: SWN Production Company, LLC
PROFESSIONAL SURVEYOR: HOWARD D. KEMP, No. 2041, STATE OF WEST VIRGINIA
 L 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.



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

GRID NORTH: UTM, NAD83 DATUM, ZONE 17, US FT
 11601'
 6420'

LONGITUDE: 80°35'00" SURFACE HOLE | 80°37'30" BOTTOM HOLE

LONGITUDE: 80°37'30" BOTTOM HOLE | 80°35'00" SURFACE HOLE

LONGITUDE: 80°35'00" SURFACE HOLE | 80°37'30" BOTTOM HOLE

LEGEND:	PROPOSED SURFACE HOLE \ BOTTOM HOLE
	EXISTING \ PRODUCING WELLS
	LANDING POINT LOCATION
	EXISTING WATER WELL
	EXISTING SPRING
REVISIONS:	SURVEYED BOUNDARY
	LEASE BOUNDARY
	ASDRILLED PATH
	PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
 ADDRESS: P.O. BOX 1300
 CITY: JANE LEW STATE: WA ZIP CODE: 98278
 DESIGNATED AGENT: BRITANY WOODY
 ADDRESS: P.O. BOX 1300
 CITY: JANE LEW STATE: WA ZIP CODE: 98278

TARGET FORMATION: MARCELLUS
 CONVERT PLUG & ABANDON CLEAN OUT & REPLUG FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

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

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

ELEVATION: (NAD 83, US FT) 1500
 PROVEN SURVEY SOURCE OF GRADE GPS
 ACCURACY: 1/500
 DEGREE OF MINIMUM

UNITED STATES TOPOGRAPHIC MAPS (+) DENOTES LOCATION OF WELL ON
 WDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25024



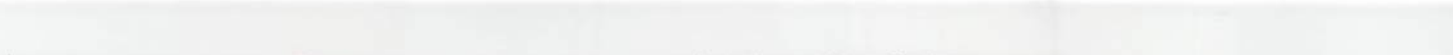
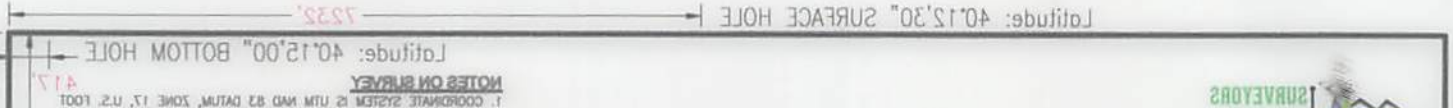
STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 No. 5041
 HOWARD D. KEMP
 LICENSED

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL INFORMATION REQUIRED BY LAW AND REGULATION AND APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOTTOM HOLE LOCATION (BHL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 442032.91	EASTING: 531784.90
LANDING POINT LOCATION (LPL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 444817.23	EASTING: 532940.79
SURFACE HOLE LOCATION (SHL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 444898.63	EASTING: 533280.92

BOTTOM HOLE LOCATION (BHL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 442034.50	EASTING: 531783.00
LANDING POINT LOCATION (LPL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 444802.454	EASTING: 532928.04
SURFACE HOLE LOCATION (SHL):	UTM (NAD83, ZONE 17, METERS):	NORTHING: 444898.64	EASTING: 533280.89

GRAPHIC SCALE IN FEET
 0 2000
 LINE BEARING DISTANCE
 L1 N02°58'42" E 1810.38'
 L2 N17°28'33" W 1502.98'



WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	RYNIAWEC MIKE (S)/(R)	03-842-0033.0000	102.00
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	LUTHER GRIZZEL	03-842-0029.0000	79.13
3	HEINZROTH HENRY	03-842-0032.0000	140.52
4	ROCCO A. BASIL, JR.	03-842-0019.0000	104.556
5	BRUCE & DARLENE HENTHORN	03-842-0019.0001	0.08
6	BRUCE & DARLENE HENTHORN	03-842-0014.0000	2.65
7	DEAN S. MILLER AND WIFE, SANDRA D. MILLER	03-842-0024.0000	0.77
8	JOHN KLOWANISH JR. & LEE ANN KLOWANISH	03-842-0025.0000	0.48
9	DANIEL R. GORBY	03-842-0026.0000	1.97
10	DANIEL R. GORBY	03-842-0003.0000	5.00
11	LINDA REEVES GREATHOUSE AND VICKI LYNN HAMILTON	03-837-0087.0000	317.23
12	ROD EDWARD PATTISON JR.	03-842-0002.0000	6.08
13	DALE V. HOPKINS	03-836-0124.0000	34.11
14	DALE V. HOPKINS & DANA M. HOPKINS (SURV)	03-837-0119.0000	23.62
15	LORI MATTHEWS	03-837-0119.0002	2.434
16	MARK A. GRIZZEL (LE-EUGENE (& MARGARET GRIZZEL)	03-837-0113.0000	1.25
17	HERBERT G. WEAVER JR & ANITA H. WEAVER (SURV)	03-836-0125.0000	29.47
18	DANIEL A. NICHOLSON	03-837-0117.0000	1.14
19	JOHN JOSEPH HUFF & CHRISTINE C. HUFF	03-837-0116.0000	1.08
20	GEORGE M. LEWIS & JUDY A. LEWIS (SURV)	03-837-0041.0001	5.56
21	VICKE C. LOUGHERY & SHEENA R. LOUGHERY (SURV)	03-837-0041.0000	41.00

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	BUREK JOSEPH S & JANE M (SURV)	03-847-0019.0000	117.68
B	FLUHARTY ELIZABETH ELLEN	03-847-0018.0000	52.00
C	MAYHEW KATHY LYNN & MICHAEL ETAL (SURV)	03-842-0027.0000	84.74
D	GRIZZEL LUTHER	03-842-0031.0000	18.87
E	GRIZZEL LUTHER	03-842-0030.0000	10.48
F	COLLINS JAY GLEN	03-841-0080.0000	291.95
G	AINSCOUGH FRANK G & KELLY L (SURV)	03-842-0071.0000	12.54
H	KENNY RICHARD HAROLD & JOY LYNN (SURV)	03-842-0020.0000	4.51
I	CONLEY RICKEY D SR & DEBRA	03-842-0013.0000	1.75
J	NORTHERN HANCOCK BANK & TRUST COMPANY	03-842-0023.0000	1.10
K	MILLER DUANE D & BETTY J	03-842-0005.0000	0.73
L	PATTISON ROD EDWARD JR	03-842-0004.0000	13.25
M	SNODERLY ROGER L & KAREN A (SURVIVORSHIP)	03-841-0106.0000	14.58
N	LOY CHRISTOPHER S & INGRID E (SURV)	03-836-0119.0000	13.80
O	FORKER VIRGINIA MAY HUNT	03-836-0121.0000	2.00
P	ROCKHOLD HOWARD M & DEBRAH S (SURV)	03-836-0122.0000	1.16
Q	JEFFREY ALAN FERRY ETAL	03-836-0117.0000	4.04
R	JOSEPH P. LIZON JR	03-836-0123.0000	0.53
S	CHAPEL HILL CHURCH	03-836-0131.0000	1.10
T	DONNELLY LORIE T & HOIT MICHAEL A (SURV)	03-836-0130.0000	5.75
U	IZSO DAVID LEE; ELIZABETH JANE	03-836-0129.0000	3.00
V	COLIN P. KELLY II; NANCY E. TAYLOR (SURV)	03-836-0127.0000	1.01
W	TIMOTHY J. HUFF	03-836-0128.0000	0.75
X	MILLER ZACHARY (CO-TRUSTEES- THOMAS & TONYA MILLER)	03-836-0128.0000	2.00
Y	TESLOMCH BRIAN L	03-836-0145.0000	50.91
Z	CATULLO JOHN A	03-836-0157.0000	39.50
AA	CIAMMO TARQUINO;EMMA M; ANTONIO (SURV)	03-836-0156.0000	24.53
AB	BECKETT CLYDE E & KATHRYN J (SURV)	03-837-0035.0000	6.73
AC	WALNDA RALPH JR & CAROL J	03-837-0034.0000	6.78
AD	LOUGHERY VICKE C & SHEENA R (SURV)	03-837-0103.0000	38.92
AE	SMITH HERS	03-837-0105.0000	3.89
AF	HUFF ROY & VIRGINIA C (SURV)	03-837-0106.0000	2.00
AG	LEWIS GEORGE M & JUDY	03-837-0107.0000	2.00
AH	HUNT BURT E & LOIS M	03-837-0108.0000	2.00
AI	HUNT BURT E & LOIS M	03-837-0109.0000	1.08
AJ	ROBERT LAFRANCE	03-837-0115.0000	1.07
AK	ROBERT LAFRANCE	03-837-0114.0000	1.00
AL	BANK OF AMERICA	03-837-0111.0000	1.00
AM	GRIZZEL MARK A(LE-EUGENE & MARGARET GRIZZEL)	03-837-0112.0000	0.52
AN	EMBREY WILLIAM D JR & MARCIA J (SURV)	03-837-0118.0001	1.00
AO	MCGREW DORIS FERN	03-837-0129.0000	22.52
AP	SMITH VICTOR CHARLES	03-837-0120.0000	3.00
AQ	MILLER CURTIS JOHN	03-837-0119.0001	1.95
AR	WINDSOR POWER HOUSE COAL CO	03-837-0128.0000	1.986
AS	ARACICH DIANNA	03-837-0126.0000	0.81
AT	ARACICH DIANNA	03-837-0127.0000	1.00
AU	MATHESS MICHAEL OWEN	03-837-0125.0000	1.14
AV	HALL SAMUEL M	03-842-0001.0000	18.12
AW	SMITH VICTOR CHARLES	03-837-0130.0000	27.35
AX	CONLEY EDWARD E & NANCY J	03-842-0015.0000	3.10
AY	CONLEY EDWARD E & NANCY J	03-842-0016.0000	0.74
AZ	CONLEY EDWARD E & NANCY J	03-842-0017.0000	0.04
BA	CONLEY RICKEY & DEBRA (SURV)	03-842-0018.0000	2.14
BB	MILLER CHRISTOPHER SCOTT	03-837-0094.0000	24.20
BC	CHUMNEY KEVIN	03-837-0093.0000	5.91
BD	CYPHERT DEBRA; MATTHEW ETAL	03-837-0091.0000	93.93
BE	BONE ROBERT	03-837-0090.0000	2.04
BF	BONE ROBERT	03-837-0090.0001	0.12
BG	BONE ROBERT	03-837-0089.0000	0.78
BH	CYPHERT DEBRA; MATTHEW ETAL	03-837-0088.0000	59.95
BI	CLARK CARL R. & SANDRA S. (SURV.)	03-837-0086.0000	0.83
BJ	HANEY BRIAN K. & GINA M. (SURV.)	03-837-0077.0000	45.75
BK	LPS INVESTMENT PARTNERSHIP	03-837-0066.0000	65.00
BL	SANFORD ELLEN B.	03-837-0076.0000	66.00
BM	ERDMAN EDGAR S & CECELIA M. (SURV.)	03-842-0049.0000	0.83
BN	HAZLETT JAMES & JO ELLEN (SURV.)	03-842-0060.0002	65.47
BO	MARKER PHYLLIS P	03-842-0052.0000	91.51
BP	BONAR JAMES L ETAL	03-842-0054.0000	4.83
BQ	WINDSOR POWER HOUSE COAL CO	03-842-0055.0000	21.00
BR	SMITH RALPH O & GINA L (SURV)	03-842-0064.0000	12.60
BS	MIKE RYNAWEC	03-842-0034.0000	61.17

REVISIONS:

COMPANY:

SWN

Production Company, LLC

SWN $R^+ \rightarrow V^+$
A

Production Company™

OPERATOR'S

MIKE RYNAWEC BRK

DATE: 10-10-2018

WELL #:

1H

DRAWN BY: D. REED

DISTRICT:

BUFFALO

COUNTY:

BROOKE

STATE:

WV

SCALE: N/A

DRAWING NO: 2017-220

WELL LOCATION PLAT

PROPERTY NUMBER 2501186347

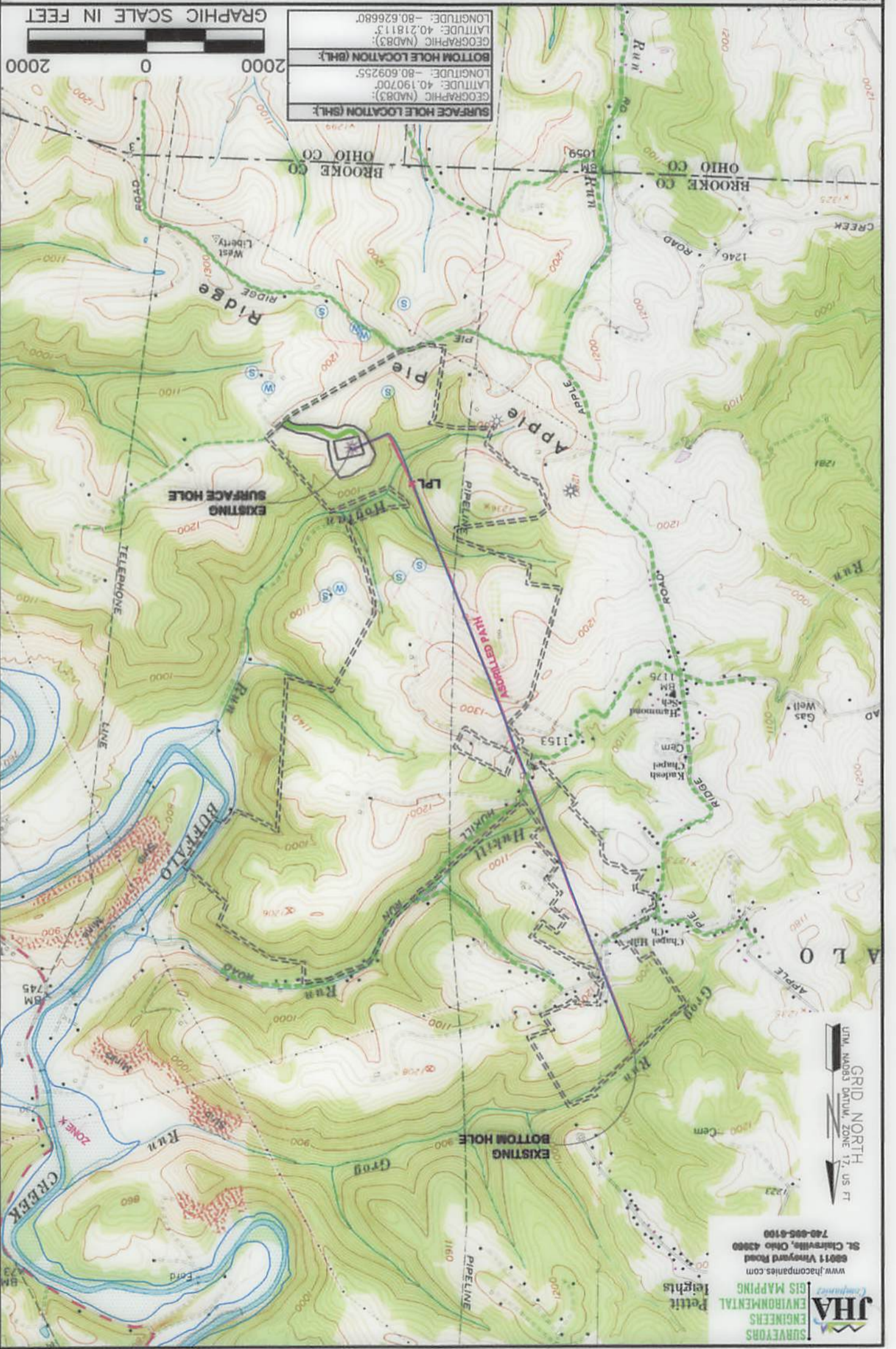
DATE: 10/10/2018

ВНЕШНОЕ ИДЕНТИФИКАЦИОННОЕ ЧИСЛО:	ВНЕШНИЙ КОПИЛ:	МАСТЕР:	МЕТ ГОСУДИОН БУД ОБЪЕДИН. ИД.: 5013-550 СЧЕТ: И\В ОБЪЕДИН. ВЛ: D' BEED ДАТА: 10-10-2018
МЕТ №:	ИИ		
ОБЪЕДИН. №:	MIKE KAMMERS ВСК		
Продукцион компания: ГТС			Продукцион компания: ГТС
СММ			СММ
ВЕРСИОН:	КОМПАНИ:		

ИДЕНТИФИКАЦИОННОЕ ЧИСЛО	ИМЕНА	ИДЕНТИФИКАЦИОННОЕ ЧИСЛО	ВЕС
B2	MIKE KAMMERS	02-843-00240000	8113
B6	ЭРИК БУГЕН О Ф ОМВ Г (ЗША)	02-843-00840000	1380
B0	MINDSON BOMER HODGE COM CO	02-843-00070000	3100
B5	BOMER HODGE G ELM	02-843-00240000	482
B0	WYKER HADTIS B	02-843-00250000	8121
B4	HUSSELL HODGE Ф Ю ЕТЕН (ЗША)	02-843-00800003	8243
B4	ЭРИК ЭДОВ З Ф СЕДТИ И (ЗША)	02-843-00480000	082
B7	ЭМЕРСОН ЕТЕН В	02-823-00380000	8800
BK	ГЪД ИВЕЗДЕНТ ИВЕЗДЕНТ	02-823-00880000	8200
B7	ИМЕЛ БУВИ К Ф ОМВ И (ЗША)	02-823-00330000	4232
B1	СЪВК СУБ Б Ф ЭМОВ З (ЗША)	02-823-00880000	082
B4	САМЕЛ DEBYE ИУЛЕНЕ ELM	02-823-00880000	2882
B0	БОМЕ БОВЕЛ	02-823-00880000	038
B2	БОМЕ БОВЕЛ	02-823-00800001	013
B0	БОМЕ БОВЕЛ	02-823-00800000	304
B0	САМЕЛ DEBYE ИУЛЕНЕ ELM	02-823-00810000	8282
B0	СЪВМЕЛ KEAN	02-823-00820000	281
B0	ИТЕВ СЪВМЕЛ SCOLL	02-823-00840000	3430
BV	СОНЕЛ WICKEL Ф DEBYE (ЗША)	02-843-00180000	314
Y3	СОНЕЛ EDWARD E Ф ИИСА 1	02-843-00130000	004
Y4	СОНЕЛ EDWARD E Ф ИИСА 1	02-843-00180000	034
YX	СОНЕЛ EDWARD E Ф ИИСА 1	02-843-00120000	210
YM	ЭРИК АСЛОБ СЪВМЕЛ	02-823-01200000	3322
Y4	ИИТ ЭИВЕЛ И	02-843-00010000	1813
Y7	ИУЛЕНЕ ИИЧЕЛ OMEI	02-823-01320000	114
Y1	ИУЛЕНЕ ОМВ	02-823-01330000	100
Y2	ИУЛЕНЕ ОМВ	02-823-01380000	081
Y6	MINDSON BOMER HODGE COM CO	02-823-01380000	1888
Y0	ИТЕВ СЪВМЕЛ JOH	02-823-01180001	182
Y6	ЭРИК АСЛОБ СЪВМЕЛ	02-823-01300000	200
Y0	ИИЧЕЛ DOBIS EEBI	02-823-01380000	3323
Y4	ЭИВЕЛ ИИТТИ О Ф ИИСА 1 (ЗША)	02-823-01180001	100
Y4	СЪВМЕЛ ИИК В(Е-ЕИЧЕЛ Ф ИИЧЕЛ СЪВМЕЛ)	02-823-01130000	023
Y7	ИИК ОЛ ИИЧЕЛ	02-823-01110000	100
YK	ИИЧЕЛ ИИЧЕЛ	02-823-01140000	100
Y7	ИИЧЕЛ ИИЧЕЛ	02-823-01120000	103
Y1	ИИЧЕЛ ИИЧЕЛ	02-823-01080000	108
Y4	ИИЧЕЛ ИИЧЕЛ	02-823-01080000	300
Y0	ИИЧЕЛ ИИЧЕЛ	02-823-01030000	300
Y6	ИИЧЕЛ ИИЧЕЛ	02-823-01080000	300
Y0	ЭРИК ИИЧЕЛ	02-823-01020000	288
Y0	ГОЛЕНЕЛ ИИЧЕЛ С Ф ЭИЧЕЛ И (ЗША)	02-823-01020000	2883
Y0	ИИЧЕЛ ИИЧЕЛ И Ф СЪВМЕЛ 1	02-823-00240000	838
Y0	БЕКЕЛ СЪВМЕЛ Е Ф ИИЧЕЛ 1 (ЗША)	02-823-00220000	832
Y4	СОНЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01280000	3422
Z	СЪВМЕЛ ИИЧЕЛ И	02-828-01230000	2820
A	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ И	02-828-01420000	2881
X	ИТЕВ СЪВМЕЛ (СО-ИИЧЕЛ-ИИЧЕЛ Ф ИИЧЕЛ ИИЧЕЛ)	02-828-01380000	300
M	ИИЧЕЛ ИИЧЕЛ	02-828-01380000	032
A	СОП ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01330000	101
P	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01380000	200
I	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01200000	232
Z	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01210000	110
B	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01320000	022
D	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01130000	404
B	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01330000	118
O	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01310000	300
I	ГОЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01180000	1280
M	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-841-01080000	1428
G	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00040000	1232
K	ИТЕВ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00020000	032
T	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00320000	110
I	СОНЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00120000	132
H	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-843-00300000	421
C	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-843-00310000	1324
L	СОП ИИЧЕЛ ИИЧЕЛ	02-841-00800000	38180
E	ИИЧЕЛ ИИЧЕЛ	02-843-00200000	1048
D	ИИЧЕЛ ИИЧЕЛ	02-843-00210000	1883
C	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-843-00330000	8434
B	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00180000	2300
V	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-843-00180000	11388
ТАБЛ	ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ
ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ			
31	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-823-00410000	4100
30	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-823-00410001	228
18	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ С ИИЧЕЛ	02-823-01180000	108
18	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-823-01130000	114
13	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-828-01320000	3843
18	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-823-01120000	132
12	ГОЛ ИИЧЕЛ ИИЧЕЛ	02-823-01180003	3424
14	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ (ЗША)	02-823-01180000	3285
12	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-828-01340000	2411
15	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00050000	808
11	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-823-00810000	21323
10	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00070000	200
8	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00380000	183
9	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00320000	048
3	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00340000	033
8	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00140000	382
2	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00180001	008
4	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00180000	10428
2	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00250000	14023
5	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00380000	3812
ТАБЛ	ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ
1	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	02-843-00220000	10300
ТАБЛ	ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ ИИЧЕЛ	ИИЧЕЛ

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

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



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 ENVIRONMENTAL GIS MAPPING
 www.jhacompanies.com
 68011 Vinograd Road
 St. Charles, Ohio 43980
 740-685-6100

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

MIKE BAINUMES SURVEYOR NUMBER: B.O. BOX 1300 WME TOWNSHIP MA S0238 ADDRESS: 2MI BROADBAND COMPANY LLC MET OBSERVATION:	BEHIND MA & LINDSAYITE OH-MA 2202 1 1/2 QUINCY MAE NAME: BOOK - 008 CORNER - CODE MIKE BAINUMES BVC MET (L&R) NAME:	BUREAU DISTRICT: IN XXXX 2018
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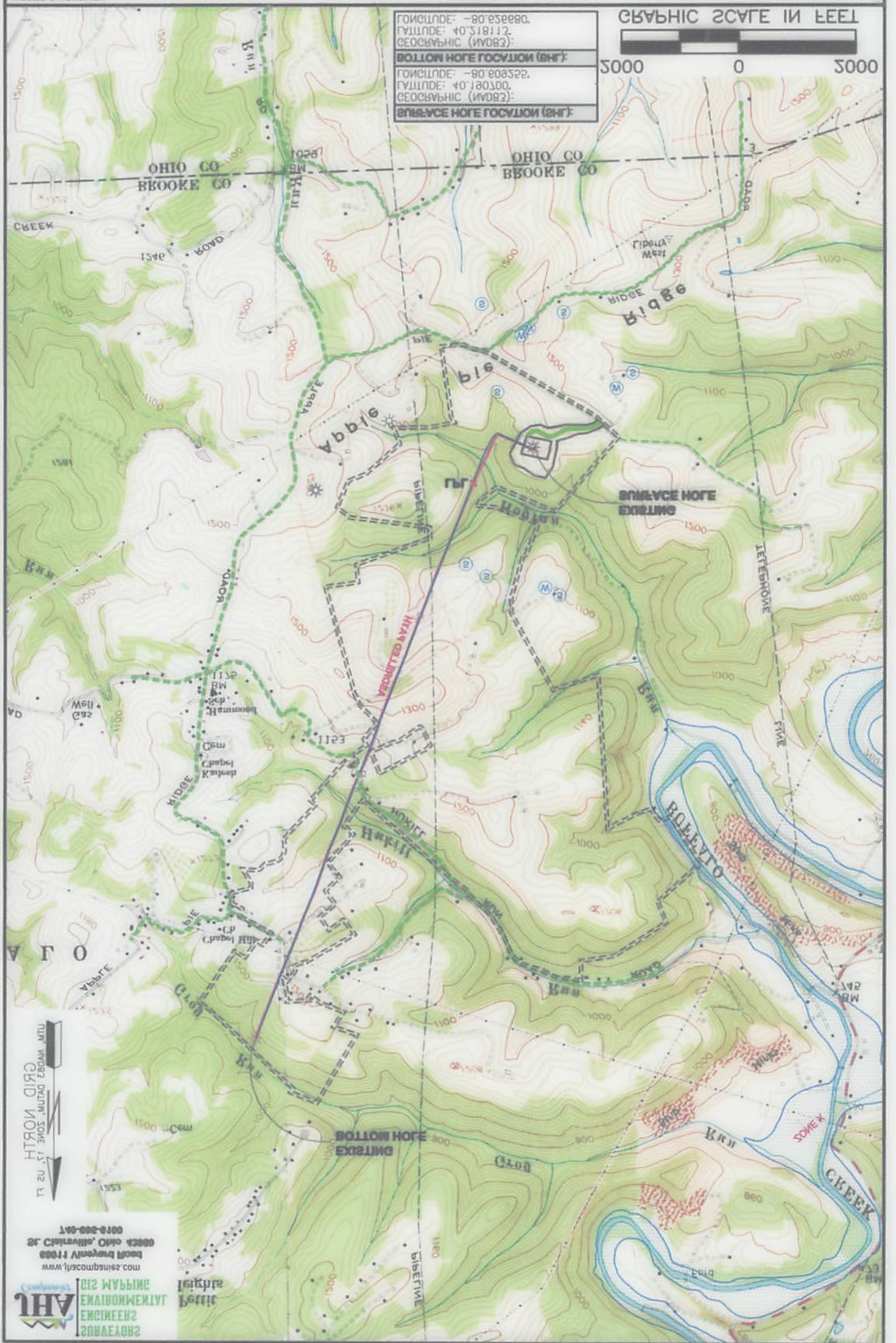
7. THE BOUNDARY LINE SHOWN HEREIN IS THE RESULT OF A SURVEY MADE BY THE SURVEYOR AND THE BOUNDARY LINE IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE ACCURACY OF THE SURVEY.

8. THIS PLAN DOES NOT REPRESENT A VALIDATION OF THE DEEDS OR RECORDS OF THE COUNTY RECORDS.

9. THE SURVEYOR HAS REVIEWED THE RECORDS OF THE COUNTY RECORDS AND HAS FOUND NO RECORDS THAT AFFECT THE SURVEY.

10. THE SURVEYOR HAS REVIEWED THE RECORDS OF THE COUNTY RECORDS AND HAS FOUND NO RECORDS THAT AFFECT THE SURVEY.

- EGOOD BVM
- BOUNDARY
- EXISTING / BOUNDARY METHOD
- BOUNDARY SURVEY NOTE / BOUNDARY NOTE
- LEGEND:
- UNBUILT BVM
- BOUNDARY
- FEED BOUNDARY
- USCESS BOUND TO BREA 21E
- BOUNDARY
- USCESS BOUND



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