



SWN Production Company, LLC
P O Box 12359
Spring, Texas 77301-2359
www.swn.com

Via Federal Express

September 3, 2020

State of West Virginia
Department of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

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RE: SWN Production Company, LLC
Operator ID: 494512924
Regulatory Filings: WR-34 & WR-35

WV Department of
Environmental Protection

To Whom It May Concern:

Please find enclosed form WR-34 Discharge Monitoring Report and WR-35 Operator's Report of Well Work along with supporting documentation, for the wells listed below :

API	Well Name
47-009-00291	Russell Hervey BRK 201H
47-009-00292	Russell Hervey BRK 401H

If you have any questions or require additional information, please contact me via email at bobby_willis@swn.com or telephone at (281) 630-7011.

Sincerely,

Bobby Willis
Senior Regulatory Analyst
SW Appalachia Division

/bw
Encl.

RV
A *V+*

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

API 47-009-00292 County BROOKE District BUFFALO
Quad STUBENVILLE Pad Name RUSSELL HERVEY BRK PAD Field/Pool Name PANHANDLE FIELD WET
Farm name RUSSELL D. HERVEY & LISA K. HERVEY Well Number RUSSELL HERVEY BRK 401H
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 4,456,507.303 Easting 537,697.314
Landing Point of Curve Northing 4,456,253.465 Easting 536,905.103
Bottom Hole Northing 4,459,539.319 Easting 535,562.033

Elevation (ft) 1,166' 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 12/13/2019 Date drilling commenced 02/14/2020 Date drilling ceased 02/25/2020
Date completion activities began 05/20/2020 Date completion activities ceased 06/10/2020 RECEIVED
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A Office of Oil and Gas
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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug WV Department of Environmental Protection

Freshwater depth(s) ft 250 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 404 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 255 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:  10-13-20

API 47-009 - 00292

Farm name RUSSELL D. HERVEY & LISA K. HERVEY Well number RUSSELL HERVEY BRK 401H

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-55/84#		Y
Surface	17.5	13.375	363	NEW	J-55/54.50#		Y, 10 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2022	NEW	J-55/36#		Y, 28 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	18783	NEW	HCP-110/20#		Y, 20 BBLS
Tubing		2.875	7205	NEW	P-110/6.50#		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	CLASS A	360	15.60	1.20	432	SURFACE	24
Coal	SEE SURFACE						
Intermediate 1	CLASS A	734	15.60	1.19	873.46	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,252	15.60	1.19	3,869.88	SURFACE	24
Tubing							

Drillers TD (ft) 18,783

Loggers TD (ft) 18,783

Deepest formation penetrated _____

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5,884'

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

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INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING

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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

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS

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

API 47-009 - 00292

Farm name

RUSSELL D. HERVEY & LISA K. HERVEY

Well number

RUSSELL HERVEY BRK 401H

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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Please insert additional pages as applicable.

API 47- 009 - 00292 Farm name RUSSELL D. HERVEY & LISA K. HERVEY Well number RUSSELL HERVEY BRK 401H

PRODUCING FORMATION(S) DEPTHS

MARCELLUS 5,840' TVD 6,778' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow Oil TEST Flow Pump
SHUT-IN PRESSURE Surface 1920 psi Bottom Hole psi DURATION OF TEST hrs

OPEN FLOW Gas 5,455 mcfd Oil 799 bpd NGL bpd Water 672 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP		BOTTOM		DEPTH IN FT	DEPTH IN FT		MD	BOTTOM MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT	TVD	DEPTH IN FT	MD		DEPTH IN FT	MD			
	0			0						
	SEE	ATTACHMENT		3						

Please insert additional pages as applicable.

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

Logging Company BAKER HUGHES
Address 9110 GROGANS MILL RD City THE WOODLANDS State TX Zip 77380

Cementing Company SCHLUMBERGER WELL SERVICES
Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478

Stimulating Company HALLIBURTON ENERGY SERVICES
Address 14851 MILNER ROAD City HOUSTON State TX Zip 77032

Please insert additional pages as applicable.

Completed by BOBBY WILLIAMS Telephone 832-796-2884
Signature *Bob Williams* Title SENIOR REGULATORY ANALYST Date

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

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SWN PRODUCTION COMPANY, LLC

Location: Brooke County, WV
 Field: Brooke
 Facility: Russell Harvey BRK Pad

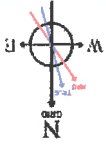
Well: Russell Harvey BRK 401H
 Slot: Russell Harvey BRK 401H PWB

Wellbore: Russell Harvey BRK 401H PWB

PWB reference weights are Russell Harvey BRK 401H PWB Raw-40 Grid System: NAD83 / UTM Zone 17 North, US feet North Reference: Grid north Scale: True distance Reference weights measured depths are referenced to SDC 42 (PRB) SDC 42 (PRB) to Mean Sea Level: 1192 feet Coordinates are in feet referenced to Slot Depth are in feet Created by: seijin on 2020-02-26; Database: WA_MPL_EASTSTATE_PWB
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Other weight IDs are referenced to each pipe detail MD drum

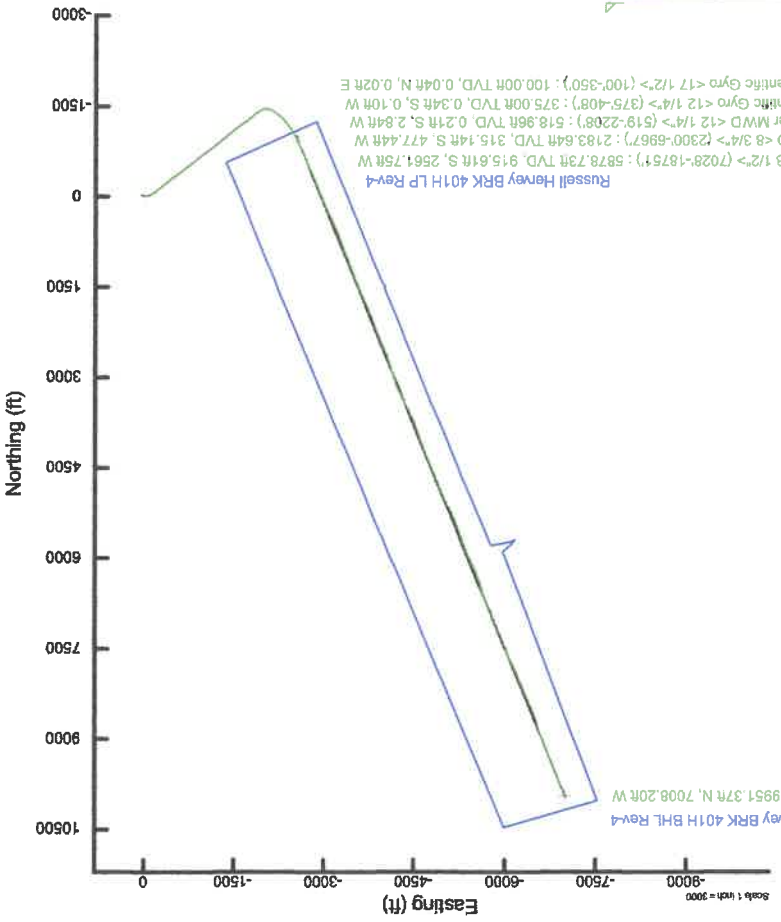
User specified Dip: 5.51° Pitch: 0.006 ft
 Magnetic North is 8.64 degrees West of True North (at 2/16/2020)
 Grid North is 0.20 degrees East of True North
 To convert azimuth from True to Grid subtract 8.79 degrees
 To convert azimuth from Magnetic to Grid subtract 8.79 degrees



Location Information			
Facility Name	Russell Harvey BRK Pad	Local N (ft)	Local E (ft)
Slot #401	28.77	-19.06	1764114.320
Grid East (US ft)	1764114.320	Grid North (US ft)	14621028.950
Latitude	40°15'29.1645"N	Longitude	80°33'23.8679"W
Grid East (US ft)	1764114.320	Grid North (US ft)	14621057.710
Latitude	40°15'29.4397"N	Longitude	80°33'24.1119"W
SDC 42 (PRB) to Ground level (At Slot: Slot #401)	26ft		
Mean Sea Level to Ground level (At Slot: Slot #401)	-116ft		
SDC 42 (PRB) to Mean Sea Level	1192ft		

AP# 47-009-00292-0000
 BH Job #: 110283341A
 Rfg: SDC 42
 Duration: 02/20/2020 - 02/23/2020

Comments



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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/21/2020
Job End Date:	6/5/2020
State:	West Virginia
County:	Brooke
API Number:	47-009-00292-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Russell Hervey BRK 401H
Latitude:	40.25817800
Longitude:	-80.55669700
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,887
Total Base Water Volume (gal):	20,302,446
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 Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Halliburton	Base Fluid					
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	66.58805	Density = 8.34
			Water	7732-18-5	100.00000	23.47571	Density = 8.50

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					Listed Above	Ingredients
	Water	7732-18-5	100.00000	0.46865		
					Proppant	Sand-Premium White-40/70
					Listed Below	
					Solvent	HYDROCHLORI C ACID, 22 BAUME
					Listed Below	
					Scale Control	LEGEND(TM) LD-7750W
					Listed Below	
					Friction Reducer	LD-2950
					Listed Below	
					Acid Corrosion Inhibitor	HAI-501
					Listed Below	
					Proppant	Sand-Common White-100 Mesh, SSA-2
					Listed Below	
					Additive	FE-2A
					Listed Below	
					Additive	MC MX 8-4743

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			14808-60-7	Crystalline silica, quartz	100.00000	9.30306	
			7647-01-0	Hydrochloric acid	30.00000	0.05214	
			Proprietary	Complex Amine Compound	60.00000	0.04959	
			64742-47-8	Hydrotreated light petroleum distillate	30.00000	0.02480	
			7631-99-4	Sodium nitrate	60.00000	0.02167	
			67-56-1	Methanol	100.00000	0.00494	
			Proprietary	Ethoxylated alcohols	5.00000	0.00413	
			77-92-9	Citric acid	60.00000	0.00261	
			10102-40-6	Sodium molybdate	5.00000	0.00181	
			69011-36-5	Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	1.00000	0.00083	
			124-04-9	Adipic acid	1.00000	0.00083	
			7647-14-5	Sodium chloride	5.00000	0.00042	
			Proprietary	Phosphoric Acid Salt	5.00000	0.00039	
			61790-12-3	Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	30.00000	0.00009	
			Proprietary	Modified thiourea polymer	30.00000	0.00009	
			8013-01-2	Yeast extract	0.10000	0.00004	
			72-17-3	Sodium lactate	0.10000	0.00004	
			127-09-3	Sodium acetate	0.10000	0.00004	
			7778-77-0	Monopotassium phosphate	0.10000	0.00004	
			629-73-2	Hexadecene	5.00000	0.00002	
			Proprietary	Ethoxylated alcohols	5.00000	0.00002	
			107-19-7	Propargyl alcohol	5.00000	0.00002	
			50-00-0	Formaldehyde	0.10000	0.00001	

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Listed Below

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)

* 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

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**RUSSELL HERVEY BRK 401H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MDZ	# SHOTS PER STG
1	5/15/2020	18,699	18,611	36
2	5/21/2020	18,575	18,395	36
3	5/22/2020	18,362	18,182	36
4	5/22/2020	18,148	17,969	36
5	5/23/2020	17,935	17,755	36
6	5/23/2020	17,724	17,542	36
7	5/23/2020	17,509	17,329	36
8	5/24/2020	17,295	17,115	36
9	5/24/2020	17,082	16,902	36
10	5/24/2020	16,869	16,689	36
11	5/24/2020	16,655	16,476	36
12	5/24/2020	16,442	16,262	36
13	5/25/2020	16,229	16,049	36
14	5/25/2020	16,025	15,836	36
15	5/25/2020	15,802	15,622	36
16	5/26/2020	15,589	15,409	36
17	5/26/2020	15,376	15,196	36
18	5/26/2020	15,162	14,982	36
19	5/26/2020	14,949	14,769	72
20	5/27/2020	14,736	14,556	36
21	5/27/2020	14,522	14,343	36
22	5/27/2020	14,309	14,129	36
23	5/27/2020	14,096	13,916	36
24	5/28/2020	13,882	13,703	36
25	5/28/2020	13,669	13,489	36
26	5/28/2020	13,456	13,276	36
27	5/28/2020	13,243	13,063	36
28	5/29/2020	13,029	12,849	36
29	5/29/2020	12,816	12,636	36
30	5/29/2020	12,603	12,423	36
31	5/30/2020	12,389	12,210	36
32	5/30/2020	12,176	11,999	36
33	5/30/2020	11,963	11,783	36
34	5/30/2020	11,745	11,570	36
35	5/30/2020	11,536	11,356	33
36	5/31/2020	11,323	11,143	33
37	5/31/2020	11,110	10,930	33
38	5/31/2020	10,896	10,716	33
39	5/31/2020	10,683	10,503	33
40	5/31/2020	10,470	10,290	33
41	6/1/2020	14,470	10,079	33
42	6/1/2020	10,043	9,863	33
43	6/1/2020	9,830	9,650	33

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RUSSELL HERVEY BRK 401H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	6/2/2020	9,616	9,437	33
45	6/2/2020	9,403	9,223	33
46	6/2/2020	9,190	9,010	33
47	6/2/2020	8,977	8,797	34
48	6/3/2020	8,763	8,583	33
49	6/3/2020	8,545	8,370	69
50	6/3/2020	8,335	8,157	33
51	6/3/2020	8,123	7,944	33
52	6/4/2020	7,910	7,730	33
53	6/4/2020	7,697	7,514	33
54	6/4/2020	7,485	7,304	33
55	6/4/2020	7,270	7,090	36
56	6/5/2020	7,057	6,877	36

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**RUSSELL HERVEY BRK 401H
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (Psi)	Amount of		Amount of nitrogen/other
						Proppant (lbs)	water bbls	
1	5/21/2020	83	7,244	5,649	3,682	240,150	10,938	0
2	5/21/2020	93.9	8,133	5,251	4,178	320,420	9,661	0
3	5/22/2020	97.2	8,223	4,653	4,044	320,700	9,486	0
4	5/23/2020	94.7	8,052	5,151	4,150	322,480	9,366	0
5	5/23/2020	98.2	8,145	5,552	5,080	318,400	8,443	0
6	5/23/2020	99.1	8,238	5,004	4,184	319,780	8,587	0
7	5/23/2020	99.4	8,221	4,929	4,134	323,364	9,636	0
8	5/24/2020	98.8	8,207	5,129	4,245	322,200	9,164	0
9	5/24/2020	99	8,263	5,069	4,062	321,160	8,591	0
10	5/24/2020	98.2	8,392	5,215	4,216	322,160	8,534	0
11	5/24/2020	97.4	8,206	5,241	4,110	320,960	8,646	0
12	5/25/2020	95.8	8,109	5,227	4,195	319,660	7,914	0
13	5/25/2020	98.5	8,297	4,442	4,151	320,120	8,219	0
14	5/25/2020	98.3	8,262	5,218	4,264	319,780	8,591	0
15	5/25/2020	96.9	8,121	5,448	4,141	320,380	8,447	0
16	5/26/2020	99.3	8,237	5,438	4,275	319,640	8,335	0
17	5/26/2020	95	7,886	5,185	4,041	318,540	8,504	0
18	5/26/2020	97.6	8,232	5,412	3,979	321,440	8,420	0
19	5/27/2020	94.7	7,835	4,914	3,975	321,040	12,971	0
20	5/27/2020	96.4	8,014	4,835	4,014	319,820	8,339	0
21	5/27/2020	96.8	7,825	5,024	4,157	319,460	8,264	0
22	5/27/2020	96.5	7,774	5,414	4,269	322,020	8,358	0
23	5/28/2020	96	7,727	5,654	4,186	322,560	8,659	0
24	5/28/2020	97.2	8,000	5,391	4,116	319,780	8,076	0
25	5/28/2020	99.2	7,891	5,144	4,342	319,420	8,174	0
26	5/28/2020	99	7,623	5,195	4,406	319,840	8,543	0
27	5/28/2020	99	7,668	5,227	4,456	321,420	8,341	0
28	5/29/2020	99.7	7,878	5,361	4,483	320,260	8,183	0
29	5/29/2020	98.6	7,916	5,123	4,091	319,380	8,026	0
30	5/29/2020	98	7,739	5,209	4,295	319,960	8,127	0
31	5/30/2020	99.4	7,794	5,315	4,404	319,880	8,289	0
32	5/30/2020	100.9	7,657	5,308	4,413	319,860	8,477	0
33	5/30/2020	98.6	7,880	5,337	4,216	321,060	8,605	0
34	5/30/2020	99	7,755	5,195	4,168	321,080	8,330	0
35	5/30/2020	99	7,598	4,737	4,286	320,480	8,232	0
36	5/31/2020	99.9	7,625	5,280	4,373	321,080	8,350	0
37	5/31/2020	72.6	7,322	5,311	3,912	322,420	10,466	0
38	5/31/2020	98	7,643	5,337	4,239	320,600	8,872	0
39	5/31/2020	98	8,022	5,574	4,339	321,180	8,584	0
40	6/1/2020	58.1	8,170	5,347	4,356	20,080	6,374	0
41	6/1/2020	100.2	7,491	4,970	4,347	319,520	8,486	0
42	6/1/2020	99	7,347	5,072	4,363	320,120	8,869	0
43	6/2/2020	99.4	7,434	5,147	4,208	320,000	8,553	0
44	6/2/2020	99.9	7,465	5,464	4,385	321,180	8,559	0
45	6/2/2020	100.2	7,309	5,178	4,094	320,380	8,527	0
46	6/2/2020	92	7,628	5,238	4,142	320,540	8,402	0
47	6/2/2020	99	7,016	4,875	4,291	320,260	8,553	0
48	6/3/2020	98.7	7,197	5,522	4,180	320,280	8,401	0
49	6/3/2020	99.3	7,250	5,168	3,678	329,305	9,555	0
50	6/3/2020	97	6,773	5,618	4,378	321,120	8,295	0
51	6/4/2020	98	7,046	5,428	4,197	319,740	8,734	0
52	6/4/2020	99	7,134	5,457	4,116	320,380	8,208	0
53	6/4/2020	99.7	6,800	5,318	4,550	320,200	8,239	0

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**RUSSELL HERVEY BRK 401H
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump		Max Breakdown	ISIP (PSI)	Amount of		Amount of nitrogen/other
		Rate (BPM)	Treatment			Proppant (lbs)	water bbls	
54	6/4/2020	97	6,573	5,368	4,235	320,180	9,390	0
55	6/4/2020	98.7	6,496	5,927	4,456	319,580	8,249	0
56	6/5/2020	97	6,527	5,399	4,290	319,720	8,736	0

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Well Name: RUSSELL HERVEY BRK 401H 47009002920000

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	250.00	250.00	
Top of Salt Water	404.00	404.00	NA	NA	
Pittsburgh Coal	255.00	255.00	417.00	417.00	
Portsville (ss)	417.00	417.00	781.00	781.00	
Raven Cliff (ss)	781.00	781.00	1170.00	1170.00	
Maxton (ss)	1170.00	1170.00	1427.00	1403.00	
Big Injun (ss)	1427.00	1403.00	1920.00	1858.00	
Berea (siltstone)	1920.00	1858.00	5951.00	5317.00	
Rhinestreet (shale)	5951.00	5317.00	6242.00	5556.00	
Cashqua (shale)	6242.00	5556.00	6313.00	5610.00	
Middlesex (shale)	6313.00	5610.00	6402.00	5670.00	
Burket (shale)	6402.00	5670.00	6422.00	5683.00	
Tully (ls)	6422.00	5683.00	6530.00	5745.00	
Mahantango (shale)	6530.00	5745.00	6778.00	5840.00	
Marcellus (shale)	6778.00	5840.00	NA	NA	GAS

RECEIVED
Office of Oil and Gas

SEP 04 2020

WV Department of
Environmental Protection

THRASHER

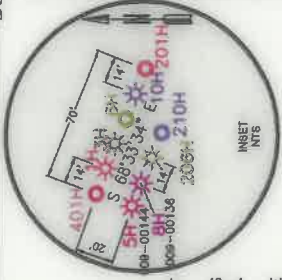
THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26630
PHONE 304-624-4108

NOTES ON SURVEY

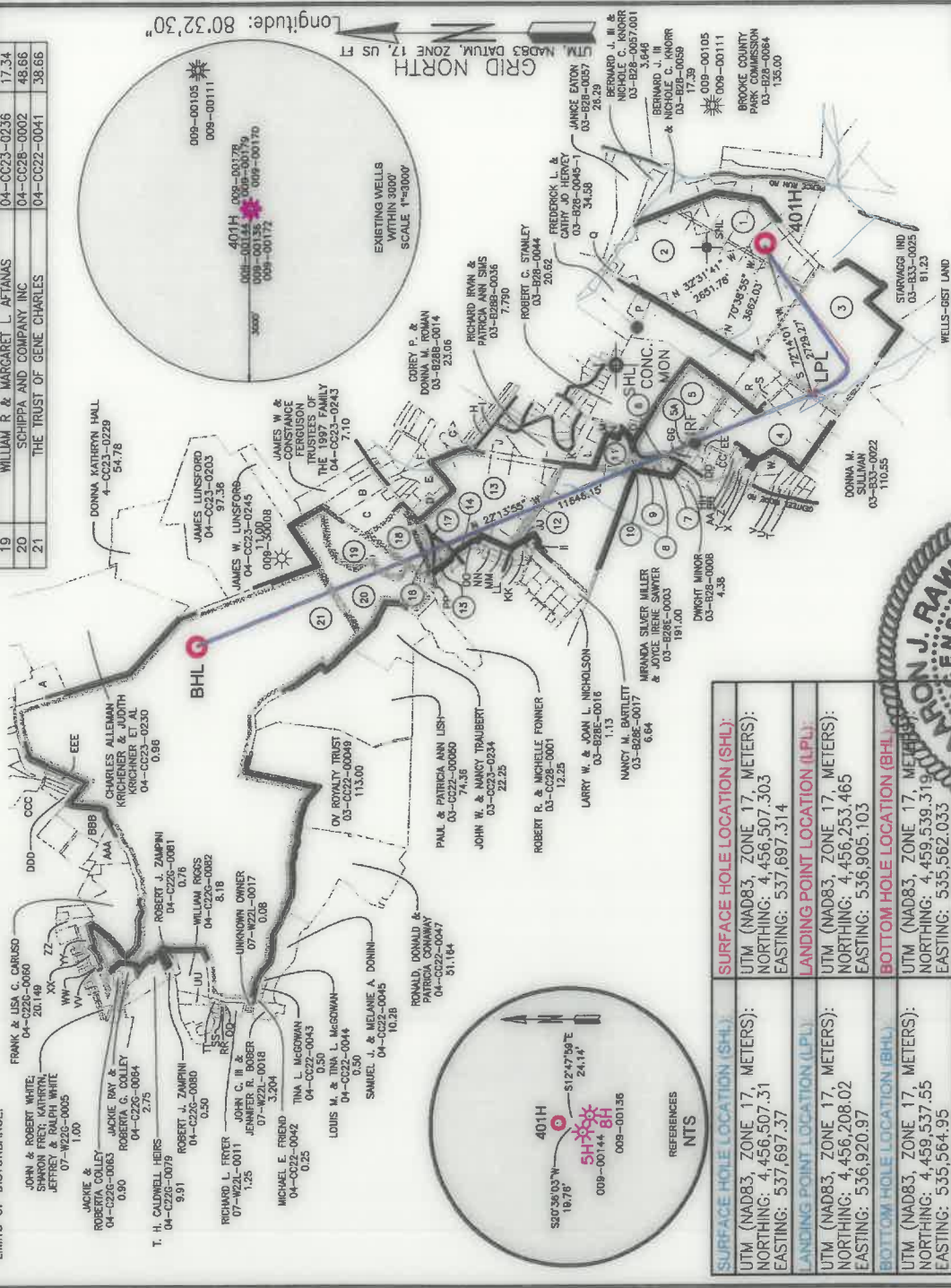
1. COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT SURFACE COORDINATES ESTABLISHED USING ANTIWEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS AND BUILDINGS WITHIN 525 FEET OF PROPOSED OF CENTER OF PAD.
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
7. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

Latitude: 40°17'30" SURFACE HOLE 4,253'

BOTTOM HOLE 11,242'



TRACT	ROYALTY OWNER	TAX PARCEL	ACRES
1	RUSSELL D. & LISA K. HERVEY	03-B28-0045	37.84
TRACT	SURFACE OWNER		ACRES
1	RUSSELL D. HERVEY	03-B28-0045	37.84
2	WILLIAM JUDDSON HERVEY III	03-B28-0045-2	11.50
3	PATRICIA GRAHAM	03-B28-0029	87.05
4	DEWITT STANLEY	03-B28-0044-1	36.442
5A	DAVID F. & ROSEANNE POSTLETHWAIT	03-B28-0044	0.90
6	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	GENESEE RIDGE RD	
7	DANIEL J. STANLEY	03-B28-0003-1	2.41
8	ALLISON M. STANLEY & TIMOTHY M. WILLIAMS	03-B28-0003	1.33
9	CALVIN D. & LYNETTE I. STANLEY	03-B28-0002	1.16
10	CALVIN D. STANLEY	03-B28-0001	0.80
11	DEWITT STANLEY	03-B28F-0061	8.03
12	OHIO AMERICAN ENERGY INC.	03-B28F-0029	66.00
13	FOUR SWANS LP	03-B28A-0039	74.28
14	MATTHEW JAMES RHODES	03-B28A-0038	1.51
15	RANDALL G. & STEPHANIE L. SASS	03-B28A-0007	7.428
16	STATE ROAD COMMISSION	03-B28A-0006	1.83
	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	STATE ROUTE 27 R/A/K	
17	WASHINGTON PIKE		
18	WILLIAM R. & MARGARET L. AFTANAS	03-CC28-0005	15.87
19	WILLIAM R. & MARGARET L. AFTANAS	04-CC23-0236	17.34
20	SCHIFFA AND COMPANY INC	04-CC28-0002	48.66
21	THE TRUST OF GENE CHARLES	04-CC22-0041	38.66



SURFACE HOLE LOCATION (SHL)	SURFACE HOLE LOCATION (SHL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,456,507.303 EASTING: 537,697.314	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,456,507.303 EASTING: 537,697.314
LANDING POINT LOCATION (LPL)	LANDING POINT LOCATION (LPL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,456,253.465 EASTING: 536,905.103	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,456,253.465 EASTING: 536,905.103
BOTTOM HOLE LOCATION (BHL)	BOTTOM HOLE LOCATION (BHL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,459,539.319 EASTING: 535,562.053	UTM (NAD83, ZONE 17, METERS): NORTHING: 4,459,539.319 EASTING: 535,562.053

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. 2312
by *8-21-2020*



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

OPERATOR'S WELL #: 401H
API WELL #: 47 009 00292
STATE COUNTY PERMIT

RUSSELL HERVEY BRK
401H
47 009 00292
STATE COUNTY PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW
WATERSHED: BUFFALO CREEK
DISTRICT: BUFFALO
SURFACE OWNER: RUSSELL D. HERVEY
OIL & GAS ROYALTY OWNER: RUSSELL D. HERVEY & LISA K. HERVEY
COUNTY: BROOKE
ELEVATION: 1166.2'
QUADRANGLE: STEUBENVILLE EAST
ACREAGE: ±37.84
ACREAGE: ±37.84

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE AS-DRILLED
TARGET FORMATION: MARCELLUS

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

DESIGNATED AGENT: BRITANNY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
ESTIMATED DEPTH: 5,757' TD 18,783' MD

LEGEND:

	PROPOSED SURFACE HOLE / BOTTOM HOLE
	EXISTING / PRODUCING WELLHEAD
	LPL* LANDING POINT LOCATION
	EXISTING WATER WELL
	EXISTING SPRING

REVISIONS:

	SURVEYED BOUNDARY
	DRILLING UNIT
	LEASE BOUNDARY
	AS-DRILLED PATH

DATE: 07-24-2020
DRAWN BY: K. POTH
SCALE: 1" = 3000'
DRAWING NO: 050-549E
WELL LOCATION PLAT

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL ACRES
A	CAROLYN F. FREEMAN	04-CC22-0025 9.00
B	EDITH E. McCOMBS	04-CC23-0239 7.00
C	NAZARENE CHURCH	04-CC23-0238 12.12
D	DANIEL L. & JO ANN GILCHRIST	03-B28A-0040 3.26
E	DANIEL L. & JOANNE GILCHRIST	03-B28B-0056 5.74
F	WILLIAM L. CONLEY	03-B28B-0002 2.13
G	RICHARD A. & CINDY A. CHAMP	03-B28B-0015 2.73
H	MARILYN TAYLOR	03-B28B-0029 1.98
I	MARILYN TAYLOR	03-B28B-0030 1.46
J	DOROTHY M. COX	03-B28B-0035 5.20
K	THERESA ANN KING	03-B28F-0020 3.06
L	THERESA KING	03-B28F-0021 4.39
M	MELISSA RICHARDSON	03-B28F-0022 0.76
N	BETTY J. NICHOLSON	03-B28F-0023 1.00
O	ROBERT & ELLEN STANLEY	03-B28F-0024 11.16
P	CHARLIE D. & BRITNEY L. FARRIS	03-B28-0045-4 3.26
Q	JAMES ROBERT & KAREN L. HERVEY	03-B28-0045-3 1.01
R	RANDY R. & PATRICIA J. GRAHAM	03-B28-0042 4.59
S	RANDY & PATRICIA GRAHAM	03-B28-0029-1 3.39
T	RYAN S. & CAROLYN A. BOOK	03-B28-0025 1.60
U	DONALD & SHERRI YOHO	03-B28-0026 1.00
V	FRED H. & KELLI J. WENZEL	03-B28-0027 2.40
W	EILEEN & TERRANCE RIDGLEY	03-B28-0029-2 3.81
X	SHANNON L. & KAILI N. RIDGLEY	03-B28-0030 0.51
Y	SHANNON & KAILI N. RIDGLEY	03-B28-0031 0.72
Z	MICHAEL H. & LORNA M. WHITCO	03-B28-0032 0.58
AA	MICHAEL H. & LORNA M. WHITCO	03-B28-0033 1.00
BB	ANDREW & AMY MARLENE NICKERSON	03-B28-0035 0.85
CC	SUE E. HORNER	03-B28-0037 1.00
DD	DYLAN S. & HEATHER N. HUFF	03-B28-0038-1 2.20
EE	DONALD A. III & BARBARA SWEARINGEN	03-B28-0038 1.02
GG	DAVID F. & ROSEANNE POSTLETHWAIT	03-B28-0040 0.54
HH	RIKKI LEE & BRENDA SUE LONG	03-B28-0004 0.50
II	CARL RICHARD SMITH	03-B28E-0028 0.45
JJ	CARL RICHARD SMITH	03-B28E-0027 0.50
KK	HERMAN ALLEN & ANITA DAWN WILLIAMS	03-B28E-0026 0.91
LL	KENNETH E. & SHARON WILLIAMS	03-B28A-0027 0.83
MM	MARTHA L. DIAMOND	03-B28A-0028 1.33
NN	GERALD W. SMITH	03-B28A-0029 1.26
OO	SANDRA K. BEAVER	03-B28A-0037 0.82
PP	WILLIAM R. & MARGARET L. AFTANAS	04-CC2B-0003 0.93
QQ	CHRISTINE L. ICE	07-W22L-0008 0.09
RR	CHRISTINE L. ICE	07-W22L-0009 0.10
SS	CHRISTINE L. ICE	07-W22L-0010 0.11
TT	LARRY N. & SANDRA K. CLEMONS	07-W22L-0004 0.36
UU	UNKNOWN OWNER	07-W22L-0005 1.99
W	GEORGE ENNIS	04-C22G-0044 0.16
WW	GEORGE F. ENNIS	04-C22G-0045 0.16
XX	EARL W. MILLER JR	04-C22G-0046 0.62
YY	MARK KOSCEVIC	04-C22G-0032 1.1
ZZ	TERRY L. & LORA J. SMITH	04-C22C-0122 2.4
AAA	CHARLES R. BOGGS	04-C22G-0057 6.72
BBB	CHARLES ISINGHOOD SR. ...	04-CC22-0032 13.00
CCC	JIMMIE D. & ROBIN J. GEORGE	04-CC22-0031 4.00
DDD	DALE E. & MARY K. ADAMS	04-CC22-0030 2.176
EEE	STEVEN P. & MARCY DIPASQUALE	04-CC22-0026 1.00



REVISIONS:

DATE: 07-24-2020
SHEET 2 OF 2
DRAWN BY: K. POTH
SCALE: NOT TO SCALE
DRAWING NO: 050-5495
WELL LOCATION PLAT