

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

API 47 - 069 - 00321 County OHIO District LIBERTY  
Quad BETHANY Pad Name SHAWN COUCH OHI Field/Pool Name PANHANDLE FIELD WET  
Farm name SHAWN W. COUCH (TRUST) Well Number SHAWN COUCH OHI 205H  
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 4,444,250.43 Easting 535,037.00  
Landing Point of Curve Northing 4,444,503.37 Easting 535,368.93  
Bottom Hole Northing 4,446,712.01 Easting 534,496.73


Elevation (ft) 1246.8' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  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 10/18/2019 Date drilling commenced 3/26/2020 Date drilling ceased 4/5/2020  
Date completion activities began 6/8/2020 Date completion activities ceased 7/15/2020  
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 316' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 611' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 488' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:  
 9/5/11-2-20

API 47-069 - 00321 Farm name SHAWN W. COUCH (TRUST) Well number SHAWN COUCH OHI 205H

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#		Y; 20 BBLS
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25	9.625	1,876	NEW	J-55/36#		Y; 32 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	15,022	NEW	HCP-110/20#		Y; 30 BBLS
Tubing		2.375	6,760	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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	420	15.60	1.20	504	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	696	15.60	1.20	835.20	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	222/2,614	14.00/15.60	1.52/1.19	337.44/3,110.66	SURFACE	24
Tubing							

Drillers TD (ft) 15,022' Loggers TD (ft) 15,022'

Deepest formation penetrated MARCELLUS Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5,509'

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 \_\_\_\_\_

API 47- 069 - 00321 Farm name SHAWN W. COUCH (TRUST) Well number SHAWN COUCH OHI 205H

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				

Please insert additional pages as applicable.

API 47- 069 - 00321 Farm name SHAWN W. COUCH (TRUST) Well number SHAWN COUCH OHI 205H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>6,203'</u>	<u>TVD</u>	<u>6,686'</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1229 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 5,004 mcfpd Oil 758 bpd NGL \_\_\_\_\_ bpd Water 542 bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<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 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 INC.  
Address 14851 MILNER ROAD, GATE 5A City HOUSTON State TX Zip 77032

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-2873  
Signature *Elizabeth Gee* Title Staff Regulatory Analyst Date 10/05/2020

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

**SHAWN COUCH OHI 205H****ATTACHMENT 1****PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	6/3/2020	14,955	14,868	36
2	6/8/2020	14,832	14,655	36
3	6/8/2020	14,622	14,445	36
4	6/9/2020	14,412	14,235	36
5	6/9/2020	14,202	14,025	36
6	6/9/2020	13,992	13,815	36
7	6/10/2020	13,782	13,605	36
8	6/10/2020	13,572	13,395	36
9	6/10/2020	13,362	13,185	36
10	6/11/2020	13,152	12,975	36
11	6/11/2020	12,942	12,765	36
12	6/11/2020	12,732	12,555	36
13	6/12/2020	12,522	12,345	36
14	6/12/2020	12,312	12,135	36
15	6/12/2020	12,102	11,925	36
16	6/12/2020	11,892	11,715	36
17	6/13/2020	11,682	11,507	36
18	6/13/2020	11,472	11,295	36
19	6/13/2020	11,262	11,085	36
20	6/14/2020	11,052	10,875	36
21	6/14/2020	10,842	10,665	36
22	6/14/2020	10,632	10,455	36
23	6/14/2020	10,422	10,245	36
24	6/15/2020	10,212	10,035	36
25	6/15/2020	10,002	9,827	36
26	6/15/2020	9,792	9,615	36
27	6/15/2020	9,582	9,405	36
28	6/16/2020	9,372	9,195	36
29	6/16/2020	9,162	8,981	36
30	6/16/2020	8,954	8,774	36
31	6/16/2020	8,744	8,562	36
32	6/16/2020	8,532	8,355	36
33	6/17/2020	8,323	8,145	30
34	6/17/2020	8,112	7,935	30
35	6/17/2020	7,902	7,725	30
36	6/17/2020	7,692	7,515	30
37	6/17/2020	7,482	7,305	30
38	6/18/2020	7,272	7,095	30
39	6/18/2020	7,062	6,885	30

## SHAWN COUCH OHI 205H

## ATTACHMENT 2

## STIM REPORT

STAGE NUM	Stim Date	Ave Pump	Ave Treatment	Max Breakdown		Amount of	Amount of	Amount of
		Rate (BPM)	Pressure (PSI)	Pressure (PSI)	ISIP (PSI)	Proppant (lbs)	water bbls	nitrogen/other
1	6/8/2020	94.7	7,536	7,000	3,543	239,540	8,009	0
2	6/8/2020	96.5	7,473	5,849	3,989	319,660	9,149	0
3	6/8/2020	97.6	7,448	5,567	4,091	329,605	9,121	0
4	6/9/2020	98.6	7,714	5,536	3,948	319,120	8,886	0
5	6/9/2020	95.4	7,980	5,919	4,045	299,070	11,864	0
6	6/10/2020	96.9	7,978	5,175	4,187	319,960	8,952	0
7	6/10/2020	96.4	8,021	5,151	4,268	319,840	9,291	0
8	6/10/2020	94.9	8,149	4,913	4,396	319,720	8,957	0
9	6/10/2020	99.3	8,005	5,240	4,370	319,640	8,977	0
10	6/11/2020	98	7,911	4,994	3,648	319,980	9,004	0
11	6/11/2020	98.8	7,836	5,336	4,250	320,220	8,817	0
12	6/11/2020	98.5	7,941	5,440	4,092	319,300	8,958	0
13	6/12/2020	95.4	7,705	5,658	4,489	319,520	8,619	0
14	6/12/2020	93.8	7,226	4,648	3,781	319,440	8,715	0
15	6/12/2020	99.2	7,536	5,246	4,024	320,160	8,657	0
16	6/13/2020	99.7	7,723	4,998	4,218	319,060	8,966	0
17	6/13/2020	99.3	7,543	5,703	3,940	319,140	8,852	0
18	6/13/2020	99.1	7,712	5,461	3,969	319,200	8,482	0
19	6/13/2020	77.8	7,712	5,326	3,895	319,480	9,473	0
20	6/14/2020	98.4	7,484	5,217	4,094	269,870	7,836	0
21	6/14/2020	99.2	7,487	5,629	4,167	280,090	8,973	0
22	6/14/2020	100	7,413	5,505	4,167	320,600	9,233	0
23	6/14/2020	98.9	7,364	5,222	3,959	320,680	8,778	0
24	6/15/2020	98.9	7,357	5,393	4,227	319,560	8,557	0
25	6/15/2020	99	7,484	5,691	4,141	269,915	7,737	0
26	6/15/2020	99.5	7,128	5,368	4,162	319,780	8,426	0
27	6/15/2020	99.9	7,309	5,486	4,128	319,660	8,604	0
28	6/16/2020	99.1	7,267	5,049	4,149	299,975	8,116	0
29	6/16/2020	99.9	7,037	5,521	3,967	320,020	7,944	0
30	6/16/2020	97.8	7,118	5,199	4,027	320,180	8,559	0
31	6/16/2020	100.4	6,995	5,480	4,283	319,040	8,579	0
32	6/16/2020	99.7	7,014	5,281	4,190	290,100	8,067	0
33	6/17/2020	100.6	7,389	5,704	4,305	319,360	8,481	0
34	6/17/2020	94.3	7,564	5,793	4,166	320,040	8,386	0
35	6/17/2020	99.3	7,040	5,835	4,231	320,580	8,218	0
36	6/17/2020	98.7	7,098	5,568	4,184	319,180	8,149	0
37	6/18/2020	100.2	6,984	5,728	4,156	319,360	8,576	0
38	6/18/2020	99.8	6,968	5,610	4,058	319,240	8,716	0
39	6/18/2020	96.5	6,662	5,602	4,197	320,980	8,437	0



Well Name: **Shawn Couch OHI 205H** **47069003210000**

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	316.00	316.00	
Top of Salt Water	611.00	611.00	NA	NA	
Pittsburgh Coal	488.00	488.00	493.00	493.00	
Pottsville (ss)	602.00	602.00	1041.00	1041.00	
Raven Cliff (ss)	1041.00	1041.00	1708.00	1708.00	
Big Injun (ss)	1708.00	1708.00	2172.00	2171.00	
Berea (siltstone)	2172.00	2171.00	5903.00	5594.00	
Rhinestreet (shale)	5903.00	5594.00	6193.00	5845.00	
Cashaqua (shale)	6193.00	5845.00	6260.00	5899.00	
Middlesex (shale)	6260.00	5899.00	6353.00	5969.00	
Burket (shale)	6362.00	6040.00	6385.00	6056.00	
Tully (ls)	6385.00	6056.00	6455.00	6103.00	
Mahantango (shale)	6455.00	6103.00	6686.00	6203.00	
Marcellus (shale)	6686.00	6203.00	NA	NA	GAS

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/8/2020
Job End Date:	6/18/2020
State:	West Virginia
County:	Ohio
API Number:	47-069-00321-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Shawn Couch OHI 205H
Latitude:	40.14790100
Longitude:	-80.58855800
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,221
Total Base Water Volume (gal):	14,210,110
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	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	70.52464	Density = 8.34
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	19.58594	Density = 8.50



Ingredients	Listed Above	Listed Above	Listed Above						
				Water		7732-18-5	100.00000	0.48538	
FE-2A	Halliburton	Additive				Listed Below			
HAI-501	Halliburton	Acid Corrosion Inhibitor				Listed Below			
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant				Listed Below			
Sand-Premium White-40/70	Halliburton	Proppant				Listed Below			
HYDROCHLORIC ACID, 22 BAUME	Halliburton	Solvent				Listed Below			
MC MX 8-4743	MultiChem	Additive				Listed Below			
LD-2950	MultiChem	Friction Reducer				Listed Below			
LEGEND(TM) LD-7750W	MultiChem	Scale Control				Listed Below			

					Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.							
						Listed Below						
						Crystalline silica, quartz	14808-60-7	100.00000	9.23062			
						Hydrochloric acid	7647-01-0	30.00000	0.05380			
						Complex Amine Compound	Proprietary	60.00000	0.05368			
						Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02684			
						Sodium nitrate	7631-99-4	60.00000	0.02187			
						Methanol	67-56-1	100.00000	0.00520			
						Ethoxylated alcohols	Proprietary	5.00000	0.00447			
						Citric acid	77-92-9	60.00000	0.00269			
						Sodium molybdate	10102-40-6	5.00000	0.00182			
						Adipic acid	124-04-9	1.00000	0.00090			
						Poly(oxy-1,2-ethanediyl), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5	1.00000	0.00090			
						Sodium chloride	7647-14-5	5.00000	0.00044			
						Phosphoric Acid Salt	Proprietary	5.00000	0.00041			
						Modified thiourea polymer	Proprietary	30.00000	0.00009			
						Mixture of dimer and trimer fatty acids of indefinite composition derived from tall oil	61790-12-3	30.00000	0.00009			
						Sodium acetate	127-09-3	0.10000	0.00004			
						Sodium lactate	72-17-3	0.10000	0.00004			
						Yeast extract	8013-01-2	0.10000	0.00004			
						Monopotassium phosphate	7778-77-0	0.10000	0.00004			
						Hexadecene	629-73-2	5.00000	0.00002			
						Ethoxylated alcohols	Proprietary	5.00000	0.00002			
						Propargyl alcohol	107-19-7	5.00000	0.00002			
						Formaldehyde	50-00-0	0.10000	0.00001			

\* 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%

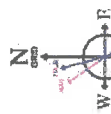
\*\*\* If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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(l) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

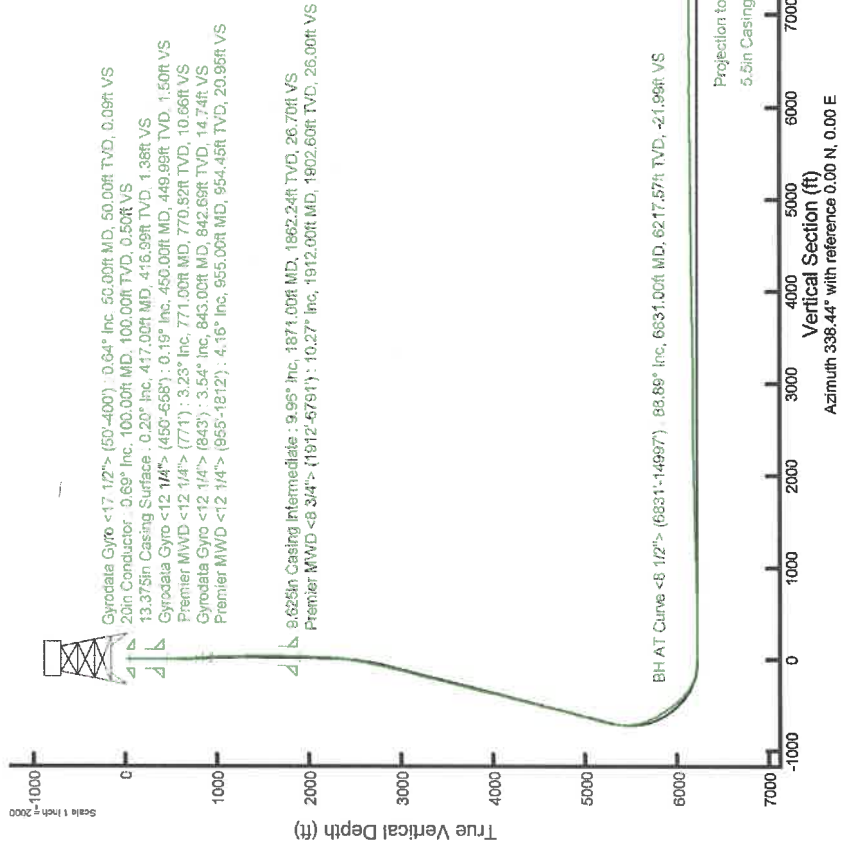
# SWN PRODUCTION COMPANY, LLC

Location: Ohio County, WV  
 Field: Ohio  
 Facility: **Shawn Couch OHI Pad**  
 Slot: Slot #205  
 Well: **Shawn Couch OHI 205H**  
 Wellbore: **Shawn Couch OHI 205H PWB**

Plan reference wellbore: Shawn Couch OHI 205H PWB Rev-A-D	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depth are referenced to SDC-42 (KB)	North Reference: Grid north
Reference wellbore: Shawn Couch OHI 205H PWB	Scale: True distance
SDC-42 (KB) to Ground Level (At Slot: Slot #205)	Coordinates are in feet, referenced to Slot
Mean Sea Level to Ground Level (At Slot: Slot #205)	Depths are in feet
Official wellbore MDs are referenced to each joint's default MD datum	Created by: abjg on 2020-04-05; Database: WPA, MPL, EASTERNUS, Job-It



Magnet Declination: 67.56°  
 Grid North is 0.27 degrees West of True North (at 3/20/2020)  
 To convert from Grid North to True North, add 0.27 degrees.  
 To convert from True North to Grid North, subtract 0.27 degrees.



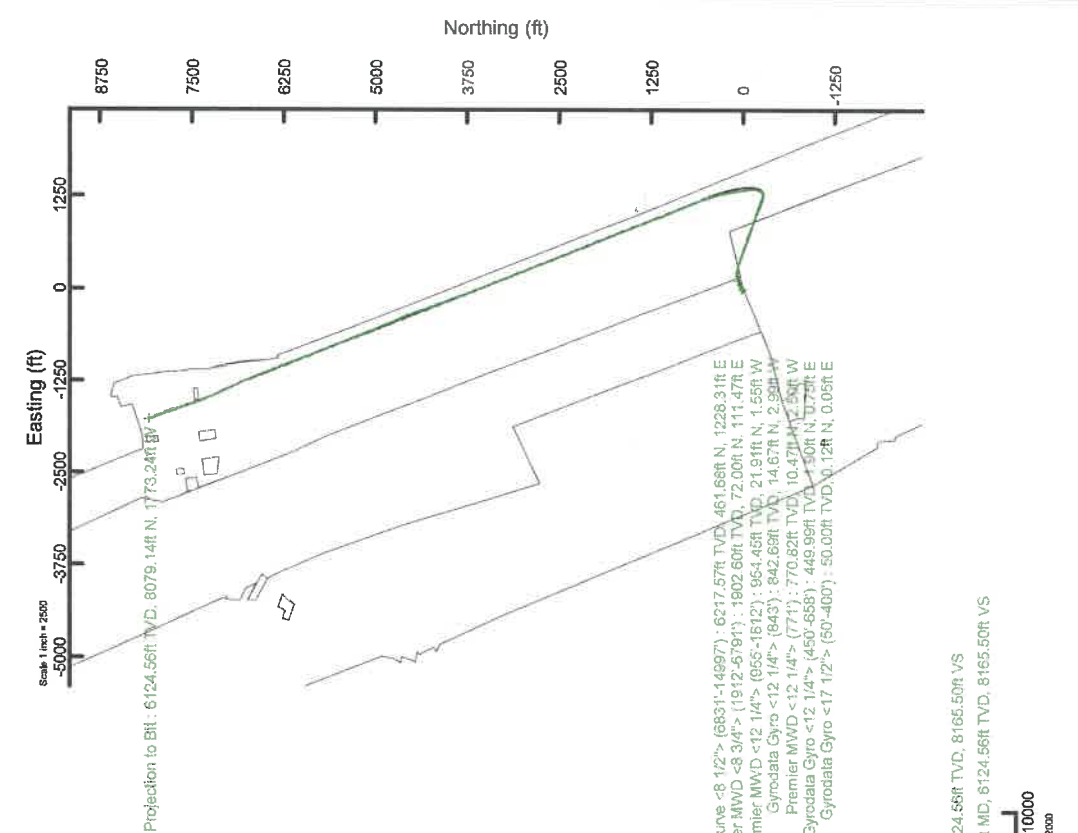
- Gyrodala Gyro <17 1/4"> (50°-400°) : 0.64° Inc, 50.00ft MD, 50.00ft TVD, 0.09ft VS
- 20in Conductor : 0.69° Inc, 100.00ft MD, 100.00ft TVD, 0.50ft VS
- 13.375in Casing Surface : 0.20° Inc, 417.00ft MD, 416.99ft TVD, 1.38ft VS
- Gyrodala Gyro <12 1/4"> (450-558°) : 0.19° Inc, 450.00ft MD, 449.99ft TVD, 1.50ft VS
- Premier MWD <12 1/4"> (771°) : 3.23° Inc, 771.00ft MD, 770.99ft TVD, 10.66ft VS
- Gyrodala Gyro <12 1/4"> (843°) : 3.54° Inc, 843.00ft MD, 842.69ft TVD, 14.74ft VS
- Premier MWD <12 1/4"> (955-1812°) : 4.16° Inc, 955.00ft MD, 954.48ft TVD, 20.95ft VS
- 8.625in Casing Intermediate : 9.95° Inc, 1871.00ft MD, 1862.24ft TVD, 26.70ft VS
- Premier MWD <8 3/4"> (1912°-5791°) : 10.27° Inc, 1912.00ft MD, 1902.60ft TVD, 26.00ft VS



### Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Shawn Couch OHI Pad	1755367.233	14580844.955	40°08'52.3250"N	80°35'19.1360"W
Slot	Local E (ft)	Local N (ft)	Latitude	Longitude
Slot #205	0.00	-0.00	40°08'52.3250"N	80°35'19.1360"W
SDC 42 (KB) to Ground Level (At Slot: Slot #205)				
Mean Sea Level to Ground Level (At Slot: Slot #205)				
SDC 42 (KB) to Mean Sea Level				
26ft				
-1246.5ft				
1272.5ft				

API: 47-066-00321-0000  
 BH Job #: 110333872A  
 Rig: SDC 42  
 Duration: 04/02/2020 - 04/04/2020





LATITUDE: 40°10'00" SURFACE HOLE | 1547'

LATITUDE: 40°12'30" BOTTOM HOLE | 3281'



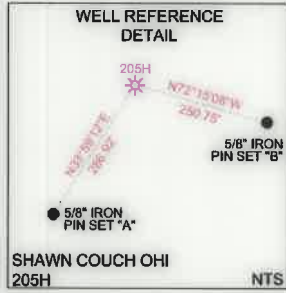
www.jhacompanies.com

68011 Vineyard Road  
St. Clairsville, Ohio 43950  
740-695-6100

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

NOTES ON SURVEY

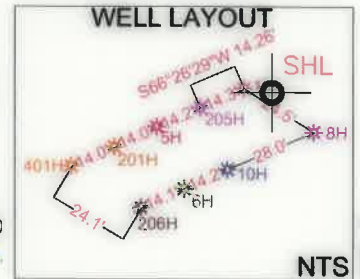
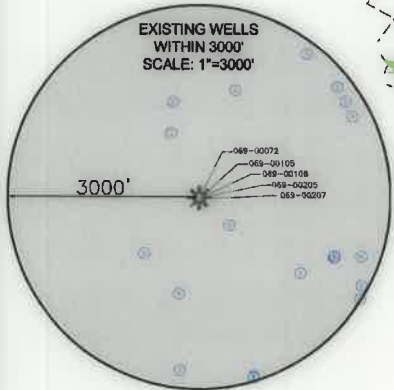
1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES 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 PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



SHAWN COUCH OHI 205H

INSET "I"

LINE	BEARING	DISTANCE
L1	S52°58'03"W	1725.62'
L2	S57°25'12"W	1577.94'



<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4444250.43 EASTING: 535037.00
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4444503.37 EASTING: 535368.93
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4446712.01 EASTING: 534496.73
<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4444250.43 EASTING: 535037.00
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4444400.10 EASTING: 535410.31
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4446712.06 EASTING: 534496.93

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



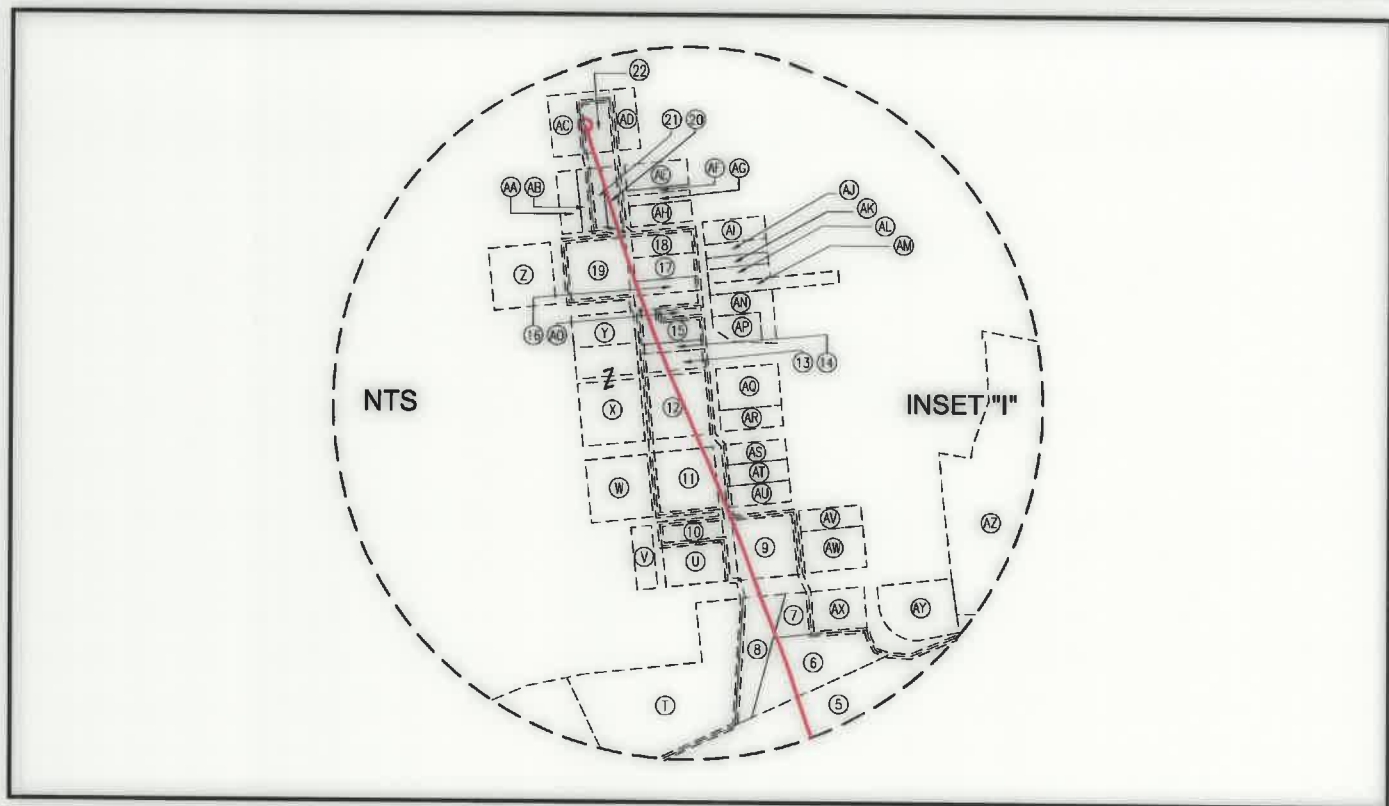
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GRAPHIC SCALE IN FEET

COMPANY: **SWN** Production Company, LLC

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL &amp; GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SOURCE OF SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>SHAWN COUCH OHI</p> <p>OPERATOR'S WELL #: 205H</p> <p>API WELL #: <b>47 069 00321</b></p> <p>STATE COUNTY PERMIT</p>						
	<p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: UPPER OHIO SOUTH ELEVATION: 1,246.8'</p> <p>DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: BETHANY, WV</p> <p>SURFACE OWNER: SHAWN W. COUCH (TRUST) ACREAGE: ±144.29</p> <p>OIL &amp; GAS ROYALTY OWNER: LL&amp;B HEADWATER II, LP &amp; RESOURCE MINERALS HEADWATER I, LP ACREAGE: ±144.29</p> <p>DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG &amp; ABANDON <input type="checkbox"/> CLEAN OUT &amp; REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) <b>AS-DRILLED</b></p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,222' TVD 15,022' TMD</p>	<p>WELL OPERATOR: SWN PRODUCTION COMPANY, LLC</p> <p>DESIGNATED AGENT: BRITTANY WOODY</p> <p>ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201</p> <p>CITY: MORGANTOWN STATE: WV ZIP CODE: 26508</p>						
<p>LEGEND:</p> <ul style="list-style-type: none"> <li>EXISTING BOTTOM HOLE</li> <li>EXISTING / PRODUCING WELLHEAD</li> <li>LPL* EXISTING LANDING POINT LOCATION</li> <li>PROPOSED SURFACE HOLE / BOTTOM HOLE</li> <li>LPL* PROPOSED LANDING POINT LOCATION</li> <li>ACCESS ROAD</li> <li>PUBLIC ROAD</li> <li>FLOOD PLAIN</li> <li>LEASE BOUNDARY</li> <li>ASDRILLED PATH</li> <li>PROPOSED PATH</li> </ul>	<p>REVISIONS:</p> <table border="1"> <tbody> <tr> <td>DATE: 06-03-2020</td> </tr> <tr> <td>API NO: 47-069-00321</td> </tr> <tr> <td>DRAWN BY: R. GRIMES</td> </tr> <tr> <td>SCALE: 1" = 2000'</td> </tr> <tr> <td>DRAWING NO: 2019-0523</td> </tr> <tr> <td>WELL LOCATION PLAT</td> </tr> </tbody> </table>	DATE: 06-03-2020	API NO: 47-069-00321	DRAWN BY: R. GRIMES	SCALE: 1" = 2000'	DRAWING NO: 2019-0523	WELL LOCATION PLAT	
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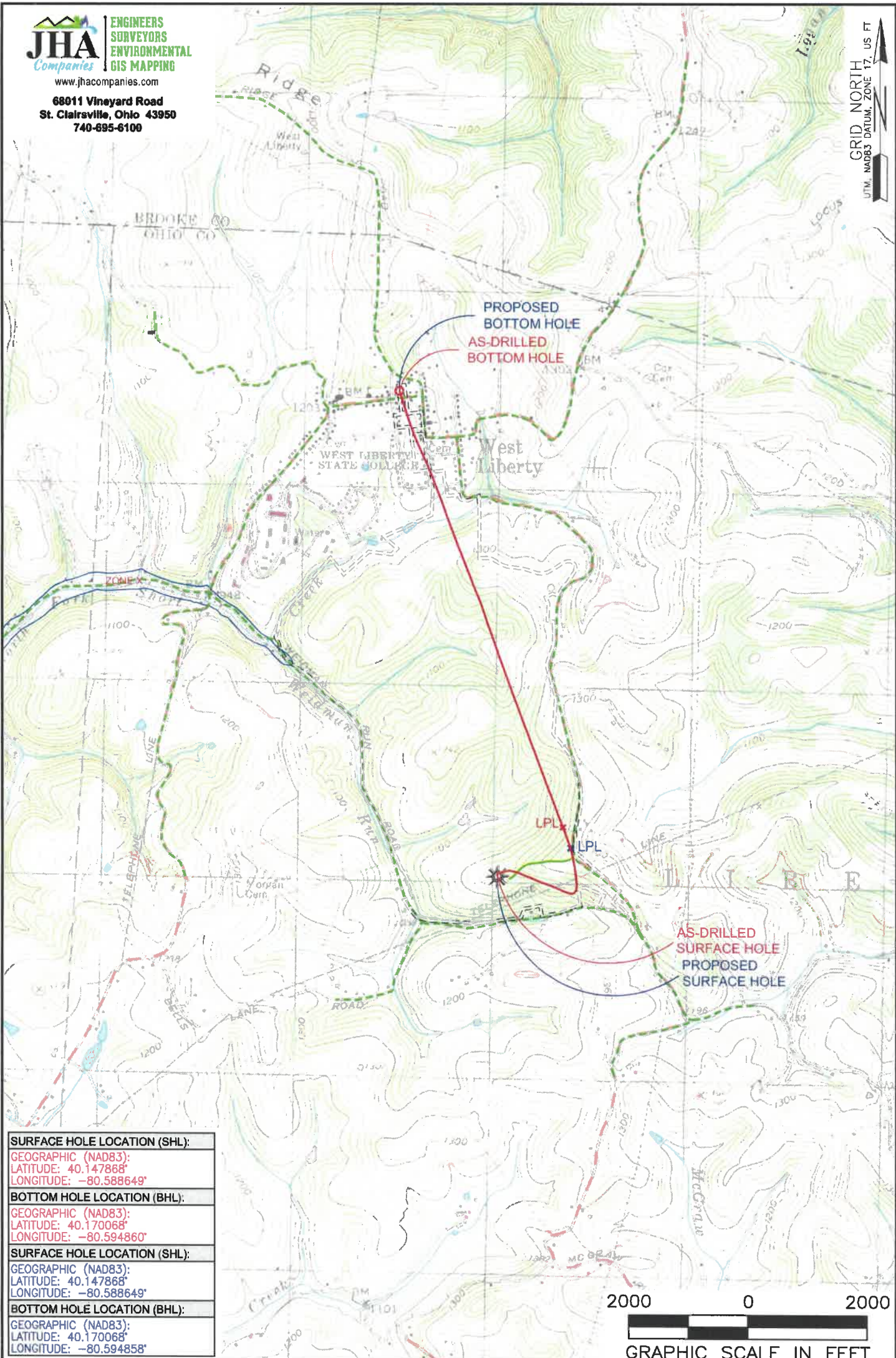
WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	SHAWN W. COUCH (TRUST) (S) LL&B HEADWATER II, LP & RESOURCE MINERALS HEADWATER I, LP (R)	03-L4-110.0
TRACT	SURFACE OWNER	TAX PARCEL
2	WILLIAM S. PATTERSON, JR.	03-L4-115.0
3	STEVEN M. MCGLUMPHY	03-L4-110.3
4	MARK A. DUVALL	03-L1-39.1
5	WEST LIBERTY STATE COLLEGE BOARD OF GOVERNORS	03-L1-35.0
6	KENNETH L. & RUTH M. FOWLER	09-WL7-31.0
7	PATRICIA L. BURKHART	09-WL7-32.0
8	DAVID T. READ	09-WL7-30.0
9	MORGAN L. CANTWELL	09-WL7-19.0
10	DANIEL R. LOUGH, JR. & JANET L. LOUGH	09-WL7-21.0
11	ROBERT K. & TAMMY R. FOWLER	09-WL7-3.0
12	PRESBYTERIAN CHURCH	09-WL3-119.0
13	T.J. ROBINSON & D.L. SOMMERVILLE	09-WL3-104.0
14	T.J. ROBINSON & D.L. SOMMERVILLE	09-WL3-104.1
15	JEANNE V. SCHRAMM	09-WL3-105.0
16	ANNE H. WESTLAKE (F/K/A ANNE H. YOUNG)	09-WL3-90.0
17	MICHAEL J. WINESBURG	09-WL3-89.0
18	HELEN MILLER LOEW	09-WL3-88.0
19	SCOTTIE W. GRAHAM, JR. & CONNIE MARIE GRAHAM	09-WL3-87.0
20	ALAN HOWARD	09-WL3-35.0
21	ALAN HOWARD	09-WL3-35.1
22	RORY S. & KRISTINA BARNES	09-WL3-14.0

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
Z	KENNETH R. & J.D. BARNES	09-WL3-86.0
AA	ALAN HOWARD	09-WL3-37.0
AB	DUANE & CHRISTY CAMPBELL	09-WL3-36.0
AC	JESSE E. & MASKEY V. GANDEE	09-WL3-13.0
AD	B. SEIDLER, P. TAYLOR, M. MAUCH & F. STANLEY (RESV. L/E)	09-WL3-15.0
AE	TOWN OF WEST LIBERTY	09-WL3-32.1
AF	RORY S. & KRISTINA K. BARNES	09-WL3-32.0
AG	RORY S. & KRISTINA K. BARNES	09-WL3-33.0
AH	RORY S. & KRISTINA K. BARNES	09-WL3-34.0
AI	DUANE & CHRISTY CAMPBELL	09-WL3-91.0
AJ	BARBARA E. GRIFFITH	09-WL3-92.0
AK	ROBERT & MELINDA S. KREISBERG	09-WL3-93.0
AL	TOWN OF WEST LIBERTY	09-WL3-93.1
AM	TOWN OF WEST LIBERTY	09-WL3-115.0
AN	NELSON & BONNIE GILBERT	09-WL3-102.0
AO	B.C.J. OFFICE, LLC	09-WL3-106.0
AP	JULIE A. HLEBICKZKI	09-WL3-103.0
AQ	MICHAEL G. WEHLER & REBECCA DAVIS	09-WL3-120.0
AR	KENNETH R. & TAMMY R. FOWLER	09-WL3-121.0
AS	ROGER L. & ALBERT J. WEST	09-WL7-5.0
AT	ROGER WEST	09-WL7-6.0
AU	DAVIS L. & L. GEAR	09-WL7-7.0
AV	CHARLES E., JR. & RUTH READ	09-WL7-18.0
AW	BARNET EDWARD & LAURIE L. BECK	09-WL7-17.0
AX	KENNETH & RUTH FOWLER	09-WL7-33.0
AY	SCOTTIE W. & CONNIE M. GRAHAM	09-WL7-16.1
AZ	KIMBERLY ANN CUSTER	03-L1-36.0
BA	MARK W. & DAWN L. WILSON	03-L1-39.11
BB	DAVID LEE BECK	03-L1-39.7
BC	DAVID L. BECK	03-L1-39.12
BD	JAMES H. & ROBIN L. BEAVER	03-L1-39.14
BE	NELSON R. DEBARR & ET AL	03-L1-40.0
BF	BERNARD R. PETTIT	03-L1-40.1
BG	MARK A. DUVALL	03-L1-39.9
BH	K.H.F. STORAGE, LLC	03-L1-39.16
BI	STEPHEN W. & MARY E. BLISS	03-L4-122.2
BJ	NELSON RAY DEBARR	03-L4-122.0
BK	ROBERT E. & E.C. DUVALL	03-L4-111.2
BL	JANICE QUEEN	03-L4-111.3
BM	MARK P. & ANNELEISE KAUFMAN	03-L5-2.0
BN	ROBERT E. & E.C. DUVALL	03-L4-111.1
BO	TODD E. PORTER	03-L4-125.0
BP	ANTHONY WAYNE PATTERSON	03-L4-116.0
BQ	RONALD H., JR. & BRENDA J. BACHMAN	03-L4-116.3
BR	WILBERT A. & GWEN ANN UPTON	03-L4-116.2
BS	MARK E. NORMAN	03-L4-110.2
BT	PAUL & RHONDA TYRNA	03-L4-114.0
BU	APPALACHIA MIDSTREAM SERVICES, LLC	03-L4-110.1

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	APPALACHIAN MIDSTREAM SERVICES, LLC	03-L4-117.0
B	WINDSOR POWER HOUSE COAL COMPANY	03-L4-105.7
C	B.G. RIDLER & J.M. TALLMON	03-L4-113.0
D	DONALD E. GILBERT, JR	03-L4-112.0
E	B.G. RIDLER & J.M. TALLMON	03-L4-106.0
F	DIXIE M. & L. LAUDERMILT	03-L4-106.1
G	HOLLAND PARK LIMITED LIABILITY	03-L4-105.0
H	ELIZABETH HONECKER (L/E: JANET HONECKER)	03-L4-104.0
I	DENNY A. WARNER	03-L4-104.5
J	JASON O. HUNTER	03-L4-104.1
K	JASON O. HUNTER	03-L4-104.2
L	JANET L. HONECKER & ELIZABETH HONECKER	03-L4-103.0
M	TIMOTHY L. MONROE & ET AL	09-WL10-11.0
N	JOHN C. & MARY P. PERRY	09-WL10-14.0
O	FOWLCON LIMITED LIABILITY COMPANY	09-WL10-13.0
P	WEST LIBERTY STATE COLLEGE BOARD OF GOVERNORS	03-L1-35.4
Q	WEST LIBERTY STATE COLLEGE BOARD OF GOVERNORS	03-L1-35.1
R	WEST LIBERTY STATE COLLEGE BOARD OF GOVERNORS	03-L1-35.9
S	BOARD OF EDUCATION	09-WL7-30.1
T	WHEELING ELECTRIC COMPANY	09-WL7-30.3
U	WESLEY E. & PATRICIA LOEW	09-WL7-20.0
V	WILLIAM G. & D.A. WAGNER	09-WL7-22.0
W	RICHARD EUGENE MCCAUSLAND	09-WL7-2.0
X	JEANNE V. SCHRAMM	09-WL3-108.0
Y	SCOTTIE W. & CONNIE M. GRAHAM	09-WL3-107.0

REVISIONS:					
COMPANY:					
OPERATOR'S		SHAWN COUCH OHI		DATE: 06-03-2020	
WELL #:		205H		API NO: 47-069-00321	
DISTRICT:		LIBERTY		DRAWN BY: R. GRIMES	
COUNTY:		OHIO		SCALE: N/A	
STATE:		WV		DRAWING NO: 2019-0523	
				WELL LOCATION PLAT	





<b>SURFACE HOLE LOCATION (SHL):</b>
GEOGRAPHIC (NAD83):
LATITUDE: 40.147868°
LONGITUDE: -80.588649°
<b>BOTTOM HOLE LOCATION (BHL):</b>
GEOGRAPHIC (NAD83):
LATITUDE: 40.170068°
LONGITUDE: -80.594860°
<b>SURFACE HOLE LOCATION (SHL):</b>
GEOGRAPHIC (NAD83):
LATITUDE: 40.147868°
LONGITUDE: -80.588649°
<b>BOTTOM HOLE LOCATION (BHL):</b>
GEOGRAPHIC (NAD83):
LATITUDE: 40.170068°
LONGITUDE: -80.594858°

**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.

<b>LEGEND:</b>	EXISTING BOTTOM HOLE	ACCESS ROAD
EXISTING / PRODUCING WELLHEAD	PUBLIC ROAD	FLOOD PLAIN
EXISTING LANDING POINT LOCATION	LEASE BOUNDARY	AS-DRILLED PATH
PROPOSED SURFACE HOLE / BOTTOM HOLE	PROPOSED PATH	
PROPOSED LANDING POINT LOCATION		

<b>WELL OPERATOR:</b> SWN PRODUCTION COMPANY, LLC	<b>WELL (FARM) NAME:</b> SHAWN COUCH OHI	<b>WELL #</b> 205H	<b>SERIAL #</b> XXXX
<b>ADDRESS:</b> 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	<b>COUNTY:</b> OHIO	<b>CODE:</b> 069	<b>DISTRICT:</b> LIBERTY
<b>SURFACE OWNER:</b> SHAWN W. COUCH (TRUST)	<b>USGS 7 1/2 QUADRANGLE MAP NAME:</b> BETHANY, WV		
			<b>API #</b> 47-069-00321