

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

API 47 - 069 - 00255 County OHIO District TRIADELPHIA  
Quad VALLEY GROVE Pad Name ESTHER WEEKS OHI PAD Field/Pool Name PANHANDLE  
Farm name ESTHER H WEEKS Well Number ESTHER WEEKS OHI 3H  
Operator (as registered with the OOG) SWN PRODUCTION COMPANY, LLC  
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4430674.14 Easting 538176.09  
Landing Point of Curve Northing 4430691.35 Easting 537991.36  
Bottom Hole Northing 4432248.63 Easting 537275.98

Elevation (ft) 1256.7 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 12/05/2017 Date drilling commenced 02/15/2018 Date drilling ceased 03/19/2018  
Date completion activities began 05/31/2018 Date completion activities ceased 07/05/2018  
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 569' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 833' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 701' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

**Reviewed**  
*[Signature]* 11-28-18

Reviewed by:  
*[Signature]*

WR-35  
Rev. 8/23/13

API 47-069 - 00255 Farm name ESTHER H WEEKS Well number ESTHER WEEKS OHI 3H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24	20	126'	NEW	J-55/94#		Y
Surface	17.5	13.375	680'	NEW	J-55/54.50#	429.4'	Y
Coal	See Intermediate						
Intermediate 1	12.25	9.625	2159'	NEW	J-55/36#		Y
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	12687'	NEW	HCP-110/20#		Y
Tubing		2.375	7132'	NEW	P-110/4.7#		N
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <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	704	15.60	1.20	844.80	SURFACE	8
Coal	See Intermediate						
Intermediate 1	CLASS A	813	15.60	1.07	869.91	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2239	15.60	1.19	2664.41	SURFACE	24
Tubing							

Drillers TD (ft) 12687' Loggers TD (ft) 12687'  
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6100'

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 \_\_\_\_\_



WR-35  
Rev. 8/23/13

API 47- 069 - 00255 Farm name ESTHER H WEEKS Well number ESTHER WEEKS OHI 3H

PRODUCING FORMATION(S)	DEPTHS	
MARCELLUS	6661'	6917'
	TVD	MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 2982 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 6363 mcfpd Oil 382 bpd NGL \_\_\_\_\_ bpd Water 304 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	
	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 1681 E MAIN STREET City BRIDGEPORT State WV Zip 26330

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

Stimulating Company HALLIBURTON ENERGY SERVICES INC  
Address 5146 ELK RIVER RD City BLUE CREEK State WV Zip 25026

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-7632  
Signature  Title Staff Regulatory Analyst Date 12/28/2018

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



**ESTHER WEEKS OHI 3H  
ATTACHMENT 1  
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	3/19/2018	12,600	12,504	36
2	6/1/2018	12,469	12,362	42
3	6/1/2018	12,329	12,222	42
4	6/2/2018	12,189	12,082	42
5	6/3/2018	12,049	11,942	42
6	6/3/2018	11,909	11,802	42
7	6/3/2018	11,769	11,662	42
8	6/3/2018	11,629	11,522	42
9	6/4/2018	11,489	11,382	42
10	6/4/2018	11,349	11,242	42
11	6/4/2018	11,209	11,102	42
12	6/4/2018	11,069	10,962	42
13	6/5/2018	10,929	10,822	42
14	6/5/2018	10,789	10,682	42
15	6/5/2018	10,649	10,542	42
16	6/5/2018	10,509	10,402	42
17	6/6/2018	10,369	10,262	42
18	6/6/2018	10,229	10,122	42
19	6/6/2018	10,089	9,982	42
20	6/6/2018	9,949	9,842	42
21	6/7/2018	9,809	9,698	42
22	6/7/2018	9,669	9,562	42
23	6/7/2018	9,529	9,422	42
24	6/7/2018	9,389	9,282	42
25	6/7/2018	9,249	9,142	42
26	6/7/2018	9,109	9,002	42
27	6/8/2018	8,969	8,862	42
28	6/8/2018	8,829	8,722	42
29	6/8/2018	8,689	8,582	42
30	6/9/2018	8,549	8,442	42
31	6/9/2018	8,409	8,302	42
32	6/9/2018	8,273	8,162	42
33	6/10/2018	8,129	8,022	42
34	6/10/2018	7,989	7,882	42
35	6/11/2018	7,849	7,742	42
36	6/11/2018	7,709	7,602	42
37	6/11/2018	7,569	7,462	42
38	6/11/2018	7,426	7,325	42
39	6/11/2018	7,289	7,182	42
40	6/12/2018	7,143	7,042	42



## ESTHER WEEKS OHI 3H

## ATTACHMENT 2

## STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
1	5/31/2018	87.4	7,558	7,120	4,257	273,200	4,973	0
2	6/1/2018	94	7,581	6,011	4,141	499,100	7,776	0
3	6/2/2018	96	7,706	5,724	4,522	500,060	8,085	0
4	6/2/2018	100	7,719	5,815	4,440	485,850	7,630	0
5	6/3/2018	99.7	7,734	4,911	4,908	496,250	7,154	0
6	6/3/2018	99.8	7,901	5,634	4,808	478,110	6,832	0
7	6/3/2018	93	7,826	5,779	4,594	497,290	7,258	0
8	6/3/2018	89	7,560	5,857	4,849	508,040	7,132	0
9	6/4/2018	99.4	7,528	5,019	5,008	498,580	7,402	0
10	6/4/2018	99.1	7,730	5,333	4,669	489,050	7,042	0
11	6/4/2018	99	7,737	5,318	4,778	496,945	7,478	0
12	6/5/2018	99	7,747	5,339	4,727	493,570	6,742	0
13	6/5/2018	100.4	7,689	5,740	4,743	485,100	6,883	0
14	6/5/2018	96.7	7,516	5,825	4,775	460,260	6,853	0
15	6/5/2018	99	7,530	5,293	4,588	486,420	6,433	0
16	6/6/2018	98	7,744	5,591	5,145	422,680	5,812	0
17	6/6/2018	95.9	7,488	5,667	4,794	482,230	6,765	0
18	6/6/2018	95	7,364	5,548	4,747	484,860	7,245	0
19	6/6/2018	99.3	7,469	5,722	4,873	487,420	6,883	0
20	6/6/2018	99.8	7,464	5,384	4,888	479,770	6,775	0
21	6/7/2018	100	7,671	6,098	4,983	487,650	6,626	0
22	6/7/2018	97.1	7,630	5,790	4,792	496,760	6,721	0
23	6/7/2018	95	7,715	5,685	5,088	500,710	7,197	0
24	6/7/2018	98.1	7,435	6,035	4,849	491,750	6,713	0
25	6/7/2018	99.1	7,412	6,003	4,819	499,000	6,717	0
26	6/8/2018	92.4	7,078	6,250	4,915	502,300	6,201	0
27	6/8/2018	95.8	7,522	5,477	4,912	495,190	6,730	0
28	6/8/2018	95.8	7,388	5,808	5,153	497,020	6,732	0
29	6/9/2018	94.3	7,627	6,099	5,077	488,280	7,728	0
30	6/9/2018	94.7	7,136	5,764	4,825	491,760	5,491	0
31	6/9/2018	87.9	7,014	5,842	4,752	470,560	6,173	0
32	6/10/2018	92.2	7,304	5,560	4,697	497,030	6,769	0
33	6/10/2018	95.2	7,066	5,867	4,737	488,770	6,281	0
34	6/10/2018	95.2	7,606	5,966	5,664	338,140	5,941	0
35	6/11/2018	99.3	6,916	5,082	4,754	493,880	6,340	0
36	6/11/2018	97.1	7,052	6,036	4,684	490,330	6,121	0
37	6/11/2018	59.2	6,870	5,906	4,615	493,900	7,707	0
38	6/11/2018	98.8	6,899	5,370	4,725	493,080	6,397	0
39	6/12/2018	94.2	6,810	5,760	4,719	494,420	6,408	0
40	6/12/2018	94.4	6,598	5,514	4,736	491,240	4,659	0



**Attachment 3**

**Well Name: Esther Weeks OHI 3H**

**47069002550000**

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	569.00	569.00	
Top of Salt Water	833.00	833.00	NA	NA	
Pittsburgh Coal	701.00	701.00	711.00	711.00	
Pottsville (ss)	NA	NA	NA	NA	
Mauch Chunk (shale)	NA	NA	NA	NA	
Raven Cliff (ss)	NA	NA	NA	NA	
Maxton (ss)	NA	NA	NA	NA	
Greenbriar (ls)	NA	NA	NA	NA	
Big Injun (ss)	1878.00	1878.00	2107.00	2107.00	
Berea (siltstone)	2444.00	2444.00	6034.00	5999.00	
Rhinestreet (shale)	6034.00	5999.00	6338.00	6298.00	
Cashaqua (shale)	6338.00	6298.00	6446.00	6395.00	
Middlesex (shale)	6446.00	6395.00	6583.00	6502.00	
Tully (ls)	6583.00	6502.00	6620.00	6529.00	
Mahantango (shale)	6620.00	6529.00	6917.00	6661.00	
Marcellus (shale)	6917.00	6661.00	NA	NA	GAS



## Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/31/2018
Job End Date:	6/12/2018
State:	West Virginia
County:	Ohio
API Number:	47-069-00255-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Esther Weeks OHI 3H
Latitude:	40.02455400
Longitude:	-80.55472500
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,646
Total Base Water Volume (gal):	11,156,266
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	81.94105	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	1.09775	



EXCELERATE LX-1	Halliburton	Friction Reducer					
				Listed Below			
SCAL16486A	Nalco Champion	Scale Inhibitor					
				Listed Below			
BIO11219A	Nalco Champion	Biocide					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				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	16.90155	
			Hydrochloric acid	7647-01-0	15.00000	0.15764	

			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02342	
			Polyacrylate	Proprietary	30.00000	0.02342	
			Methanol	67-56-1	60.00000	0.01351	
			Fatty acid ester	Proprietary	5.00000	0.00781	
			Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	30.00000	0.00675	
			Sodium chloride	7647-14-5	5.00000	0.00390	
			Ammonium chloride	12125-02-9	5.00000	0.00390	
			Ethoxylated fatty acid	Proprietary	5.00000	0.00390	
			Glutaraldehyde	111-30-8	10.00000	0.00225	
			Ethylene Glycol	107-21-1	30.00000	0.00153	
			Amine Triphosphate	Proprietary	30.00000	0.00153	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Non-hazardous food substance	Proprietary	100.00000	0.00080	

\* 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)



LATITUDE: 40°02'30" BOTTOM HOLE

5987'

LATITUDE: 40°02'30" SURFACE HOLE

3060'

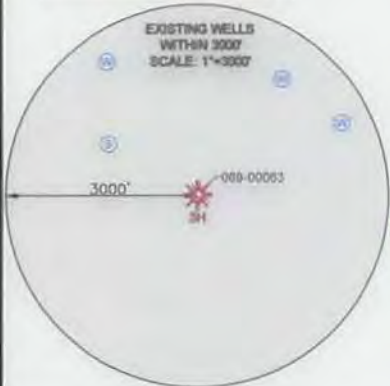
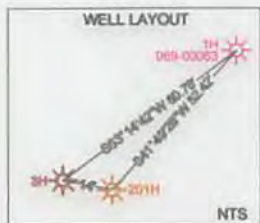
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www.jhacompanies.com  
68011 Vineyard Road  
St. Clairsville, Ohio 43950  
740-895-6100

**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. THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
4. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
6. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

12/28/2018



LONGITUDE: -80°32'30" BOTTOM HOLE

LONGITUDE: -80°32'30" SURFACE HOLE

LONGITUDE: -80°32'30" SURFACE HOLE

<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4430674.14 EASTING: 538176.09
<b>LANDING LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4430691.34 EASTING: 537991.37
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4432248.64 EASTING: 537275.99

<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4430674.14 EASTING: 538176.09
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4430691.35 EASTING: 537991.36
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4432248.63 EASTING: 537275.98



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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

LINE	BEARING	DISTANCE
L1	N31°35'00"E	2606.34'
L2	N19°37'54"E	2482.18'



COMPANY: **SWN** Production Company, LLC

ESTHER WEEKS OHI

OPERATOR'S WELL #: 3H

API WELL #: **47** STATE **069** COUNTY **00255** PERMIT

<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 SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>ESTHER WEEKS OHI</p> <p>OPERATOR'S WELL #: 3H</p> <p>API WELL #: <b>47</b> STATE <b>069</b> COUNTY <b>00255</b> PERMIT</p>
	<p>WELL TYPE: OIL WASTE DISPOSAL PRODUCTION <input checked="" type="checkbox"/> DEEP GAS <input checked="" type="checkbox"/> LIQUID INJECTION STORAGE SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: UPPER OHIO SOUTH DISTRICT: TRIADDELPHIA COUNTY: OHIO</p> <p>SURFACE OWNER: KARLA J. WEEKS OIL &amp; GAS ROYALTY OWNER: KARLA J. WEEKS</p> <p>DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION</p> <p>CONVERT PLUG &amp; ABANDON CLEAN OUT &amp; REPLUG OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED</p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,678' TVD 12,687.0' TMD</p>	<p>ELEVATION: 1256.7'</p> <p>QUADRANGLE: VALLEY GROVE, WV</p> <p>ACREAGE: ±101.47</p> <p>ACREAGE: ±101.47</p>

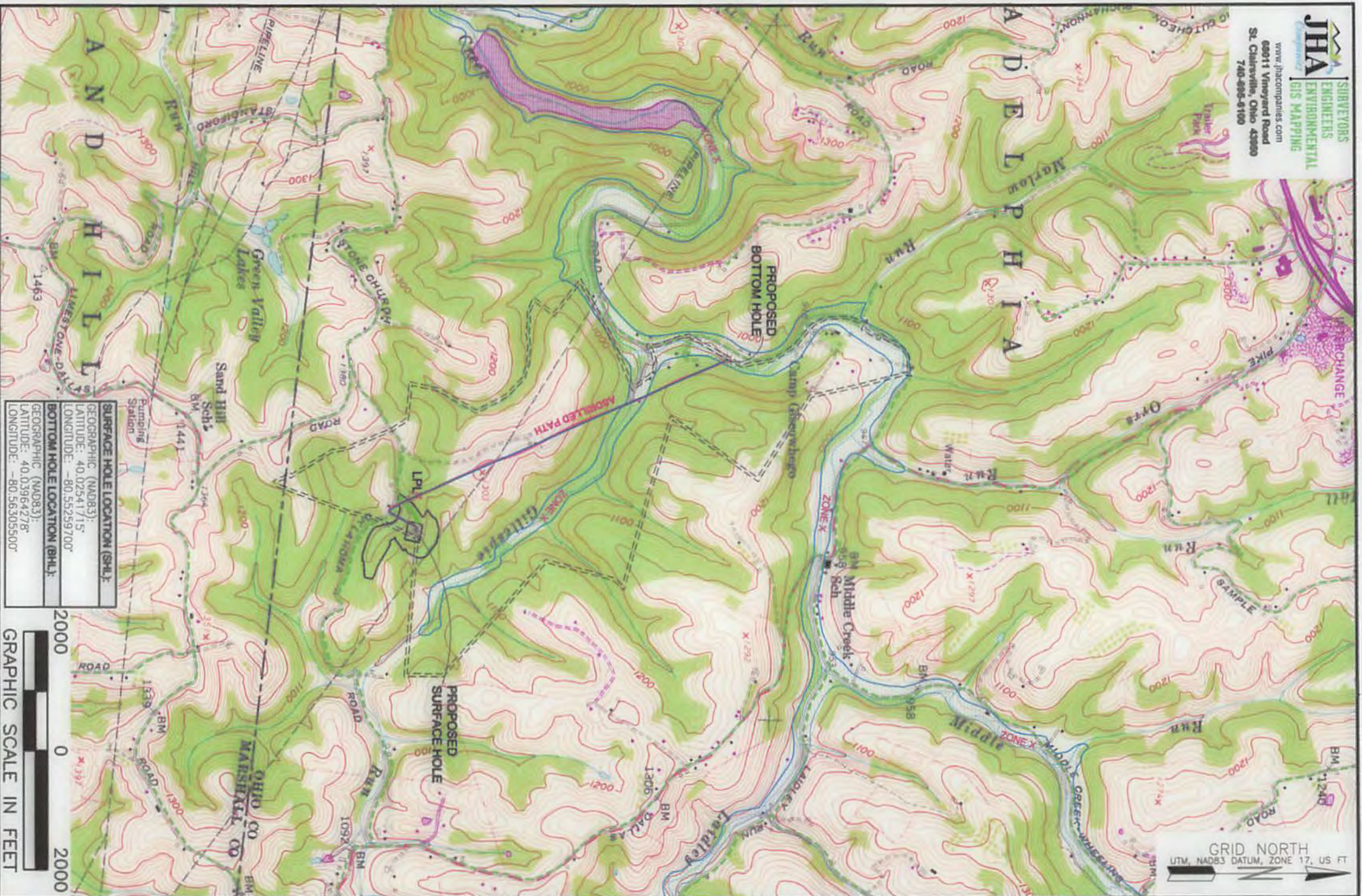
<p>WELL OPERATOR: SWN PRODUCTION COMPANY, LLC</p> <p>ADDRESS: P.O. BOX 1300</p> <p>CITY: JANE LEW STATE: WV ZIP CODE: 26378</p>	<p>DESIGNATED AGENT: BRITTANY WOODY</p> <p>ADDRESS: P.O. BOX 1300</p> <p>CITY: JANE LEW STATE: WV ZIP CODE: 26378</p>
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<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li>○ PROPOSED SURFACE HOLE / BOTTOM HOLE</li> <li>⊙ EXISTING / PRODUCING WELLHEAD</li> <li>LPL ⊙ LANDING POINT LOCATION</li> <li>⊙ EXISTING WATER WELL</li> <li>⊙ EXISTING SPRING</li> <li>— SURVEYED BOUNDARY</li> <li>===== LEASE BOUNDARY</li> <li>— AS DRILLED PATH</li> <li>— PROPOSED PATH</li> </ul>	<p><b>REVISIONS:</b></p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									<p><b>DATE:</b> 09-18-2018</p> <p><b>DRAWN BY:</b> D. REED</p> <p><b>SCALE:</b> 1" = 2000'</p> <p><b>DRAWING NO:</b> 2017-301</p> <p><b>WELL LOCATION PLAN</b></p>









**SURFACE HOLE LOCATION (SHL):**  
 GEOGRAPHIC (NAD83):  
 LATITUDE: 40.02541715°  
 LONGITUDE: -80.55259700°

**BOTTOM HOLE LOCATION (BHL):**  
 GEOGRAPHIC (NAD83):  
 LATITUDE: 40.03964278°  
 LONGITUDE: -80.56305500°

**GRAPHIC SCALE IN FEET**

2000 0 2000

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

**LEGEND:**

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ⊙ EXISTING / PRODUCING WELLS/HEAD
- LPL ✕ LANDING POINT LOCATION
- ▭ FLOOD PLAN
- ACCESS ROAD
- - - PUBLIC ROAD
- == ACCESS ROAD TO PREV. SITE
- == LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH

**WELL OPERATOR:**  
 SWIN PRODUCTION COMPANY, LLC

**ADDRESS:**  
 P.O. BOX 1300, JAME LEW, WV 26378

**SURFACE OWNER:**

**WELL (FARM) NAME:**  
 ESTHER WEEKS OHI

**COUNTY:** OHIO **CODE:** 069

**DISTRICT:**  
 TRIADAPHIA

**USGS 7 1/2 QUADRANGLE MAP NAME:**  
 VALLEY GROVE, WV

**WELL #** **SERIAL #**  
 3H XXXX



