

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

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API 47-069-00293 County OHIO District LIBERTY  
Quad VALLEY GROVE, WV Pad Name GLEN DIDRIKSEN-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET  
Farm name GLENN DIDRIKSEN Well Number GLENN DIDRIKSEN OHI 406H  
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 4,440,481.72 Easting 534,502.07  
Landing Point of Curve Northing 4,440,257.96 Easting 533,730.19  
Bottom Hole Northing 4,437,031.81 Easting 535,231.28

Elevation (ft) 1,383' GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
SOBM

Date permit issued 1/16/2019 Date drilling commenced 04/23/2019 Date drilling ceased 05/08/2019  
Date completion activities began 06/19/2019 Date completion activities ceased 7/24/2019  
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 284' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 801' Void(s) encountered (Y/N) depths Y; 653'-658'  
Coal depth(s) ft 684' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by: SB 12-17-19  
**Reviewed**  
C. R. [Signature] 12-17-19

API 47- 069 - 00293 Farm name GLENN DIDRIKSEN Well number GLENN DIDRIKSEN OHI 406H

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	764'	NEW	J-55/54.5#	600.3' / 541.5'	Y; 30 BBLS
Coal	SURFACE						
Intermediate 1	12.25	9.625	2,333'	NEW	J-55/36#		Y; 70 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75	5.5	19,227'	NEW	P-110 CYHP/20#		Y; 66 BBLS
Tubing		2.875	7,431'	NEW	P-110/6.5#		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	676	15.60	1.20	811.20	SURFACE	8
Coal	SURFACE						
Intermediate 1	CLASS A	944	15.60	1.18	1,113.92	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3550	15.60	1.19	4,224.50	SURFACE	24
Tubing							

Drillers TD (ft) 19,227' Loggers TD (ft) 19,227' RECEIVED  
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A Office of Oil and Gas  
 Plug back procedure N/A **OCT 21 2019**

Kick off depth (ft) 6,143' WV Department of Environmental Protection

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 \_\_\_\_\_



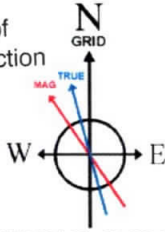


Location: Ohio County, WV Slot: Slot #406  
 Field: Ohio Well: Glenn Didriksen OHI 406H  
 Facility: Glenn Didriksen OHI Pad 1 Wellbore: Glenn Didriksen OHI 406H PWB

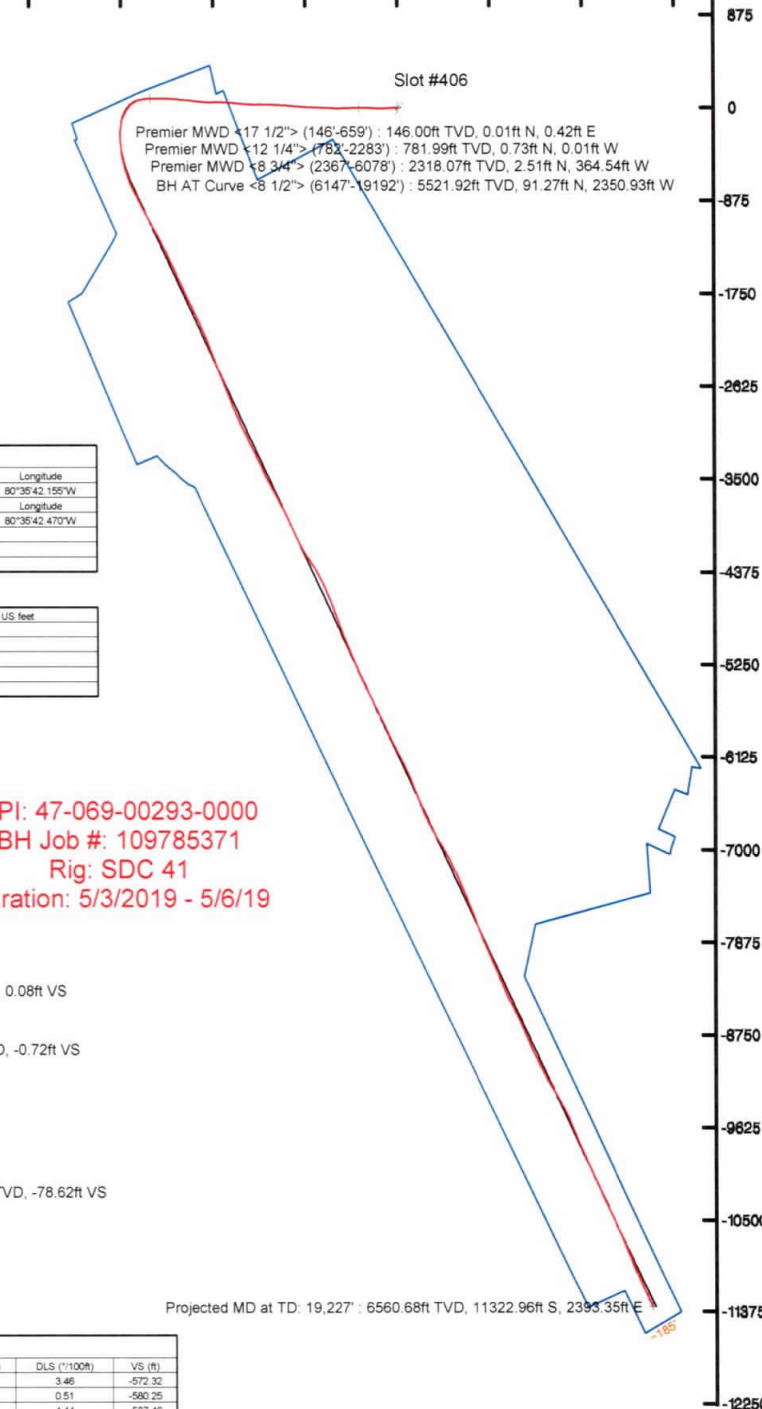
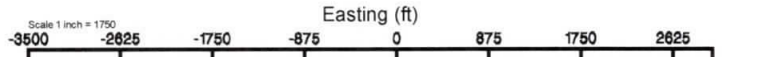
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User specified (HDGM) Dip: 67.38° Field: 52615 nT  
 Magnetic North is 8.18 degrees West of True North (at 28/Apr/2019)  
 Grid North is 0.26 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.26 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.44 degrees

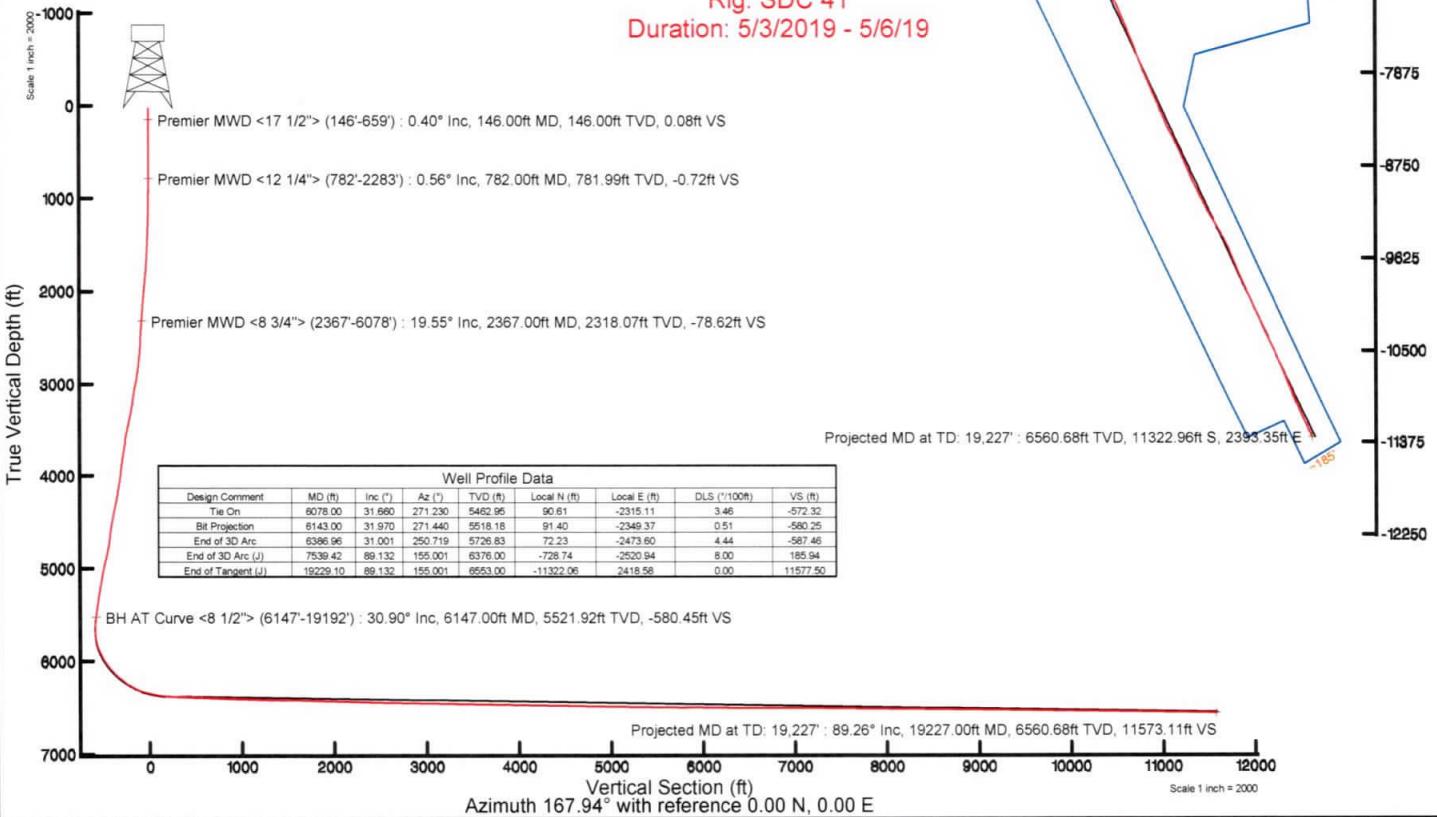


Slot #406  
 Premier MWD <17 1/2"> (146'-659') : 146.00ft TVD, 0.01ft N, 0.42ft E  
 Premier MWD <12 1/4"> (782'-2283') : 781.99ft TVD, 0.73ft N, 0.01ft W  
 Premier MWD <8 3/4"> (2367'-6078') : 2318.07ft TVD, 2.51ft N, 364.54ft W  
 BH AT Curve <8 1/2"> (6147'-19192') : 5521.92ft TVD, 91.27ft N, 2350.93ft W

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Glenn Didriksen OHI Pad 1	1753636.700	14566481.840	40°06'50.184"N	80°35'42.155"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #406	-1.40	-24.51	1753612.196	14566480.443
SDC 41 (RKB) to Ground level (At Slot: Slot #406)				26ft
Mean Sea Level to Ground level (At Slot: Slot #406)				-1382ft
SDC 41 (RKB) to Mean Sea Level				1406ft

Plot reference wellpath is Glenn Didriksen OHI 406H PWP Rev-C 0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 41 (RKB)	North Reference: Grid north
Measured depths are referenced to SDC 41 (RKB)	Scale: True distance
SDC 41 (RKB) to Mean Sea Level: 1406 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #406): -1382 feet	Created by: hiphop on 2019-05-14
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERNUS_Defn

API: 47-069-00293-0000  
 BH Job #: 109785371  
 Rig: SDC 41  
 Duration: 5/3/2019 - 5/6/19



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (1/100ft)	VS (ft)
Tie On	6078.00	31.660	271.230	5462.96	90.61	-2315.11	3.46	-572.32
Bit Projection	6143.00	31.970	271.440	5518.18	91.40	-2349.37	0.51	-560.25
End of 3D Arc	6386.96	31.001	250.719	5726.83	72.23	-2473.60	4.44	-587.46
End of 3D Arc (J)	7536.42	89.132	155.001	6376.00	-728.74	-2520.94	8.00	185.94
End of Tangent (J)	19229.10	89.132	155.001	6553.00	-11322.06	2418.58	0.00	11577.50

Projected MD at TD: 19,227' : 6560.68ft TVD, 11322.96ft S, 2393.35ft E

Projected MD at TD: 19,227' : 89.26° Inc, 19227.00ft MD, 6560.68ft TVD, 11573.11ft VS

Vertical Section (ft)  
 Azimuth 167.94° with reference 0.00 N, 0.00 E

GLENN DIDRIKSEN OHI 406H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	6/10/2019	19,182	19,090	36
2	6/21/2019	19,055	18,951	42
3	6/21/2019	18,918	18,812	42
4	6/21/2019	18,777	18,669	42
5	6/21/2019	18,636	18,528	42
6	6/21/2019	18,495	18,387	42
7	6/22/2019	18,354	18,246	42
8	6/22/2019	18,213	18,105	42
9	6/22/2019	18,072	17,964	42
10	6/22/2019	17,931	17,823	42
11	6/22/2019	17,790	17,685	42
12	6/22/2019	17,649	17,541	42
13	6/22/2019	17,508	17,400	42
14	6/23/2019	17,367	17,259	42
15	6/23/2019	17,226	17,118	42
16	6/23/2019	17,085	16,977	42
17	6/23/2019	16,944	16,839	42
18	6/23/2019	16,803	16,695	42
19	6/23/2019	16,662	16,551	42
20	6/23/2019	16,523	16,413	42
21	6/24/2019	16,380	16,272	42
22	6/24/2019	16,243	16,131	42
23	6/24/2019	16,098	15,990	42
24	6/25/2019	15,952	15,849	42
25	6/26/2019	15,816	15,708	42
26	6/26/2019	15,680	15,567	42
27	6/26/2019	15,534	15,430	42
28	6/27/2019	15,393	15,285	42
29	6/27/2019	15,252	15,144	42
30	6/28/2019	15,111	15,003	42
31	6/28/2019	14,970	14,862	42
32	6/28/2019	14,829	14,721	42
33	6/28/2019	14,684	14,580	42
34	6/29/2019	14,547	14,438	42
35	6/29/2019	14,401	14,298	42
36	6/29/2019	14,265	14,155	42
37	6/29/2019	14,124	14,016	42
38	6/29/2019	13,983	13,872	32
39	6/29/2019	13,842	13,734	42
40	6/30/2019	13,701	13,597	42
41	6/30/2019	13,560	13,452	42
42	6/30/2019	13,419	13,311	42
43	6/30/2019	13,278	13,170	42
44	6/30/2019	13,137	13,029	42
45	7/1/2019	12,996	12,888	42
46	7/1/2019	12,855	12,751	42
47	7/1/2019	12,714	12,606	42

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48	7/1/2019	12,573	12,424	42
49	7/1/2019	12,432	12,325	42
50	7/1/2019	12,291	12,183	42
51	7/1/2019	12,146	12,042	42
52	7/1/2019	12,009	11,901	42
53	7/2/2019	11,868	11,760	42
54	7/2/2019	11,727	11,619	42
55	7/2/2019	11,586	11,478	42
56	7/2/2019	11,445	11,337	42
57	7/2/2019	11,304	11,199	42
58	7/2/2019	11,163	11,055	42
59	7/2/2019	11,022	10,916	42
60	7/3/2019	10,881	10,773	42
61	7/3/2019	10,740	10,634	42
62	7/3/2019	10,599	10,491	42
63	7/3/2019	10,458	10,350	42
64	7/3/2019	10,317	10,209	42
65	7/3/2019	10,176	10,068	42
66	7/3/2019	10,035	9,927	42
67	7/3/2019	9,894	9,786	42
68	7/4/2019	9,753	9,645	42
69	7/4/2019	9,612	9,504	42
70	7/4/2019	9,471	9,363	42
71	7/4/2019	9,330	9,222	42
72	7/4/2019	9,159	9,087	33
73	7/4/2019	9,048	8,940	42
74	7/5/2019	8,907	8,799	42
75	7/5/2019	8,766	8,662	42
76	7/5/2019	8,625	8,517	42
77	7/5/2019	8,484	8,376	42
78	7/6/2019	8,343	8,235	42
79	7/6/2019	8,202	8,095	42
80	7/6/2019	8,061	7,953	42
81	7/6/2019	7,920	7,812	42
82	7/6/2019	7,779	7,671	42
83	7/7/2019	7,638	7,530	42
84	7/7/2019	7,497	7,389	42

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## GLENN DIDRIKSEN OHI 406H

## ATTACHMENT 2

## STIM REPORT

STAGE NUM	Stim 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
1	6/19/2019	79	78,093	7,804	3,906	211,059	8,965	0
2	6/21/2019	90	7,242	5,298	4,501	251,321	5,910	0
3	6/21/2019	86	7,515	5,943	4,460	245,041	5,103	0
4	6/21/2019	83	8,017	5,910	4,318	244,795	5,097	0
5	6/21/2019	84	8,265	5,883	4,256	251,104	5,224	0
6	6/21/2019	81	8,179	5,657	4,509	249,280	5,347	0
7	6/22/2019	81	8,239	5,806	4,529	243,345	5,115	0
8	6/22/2019	80	8,240	6,132	4,382	245,235	4,943	0
9	6/22/2019	80	8,177	6,333	4,426	245,043	4,664	0
10	6/22/2019	81	8,218	6,393	4,692	244,358	4,731	0
11	6/22/2019	78	8,220	5,897	4,283	244,139	4,880	0
12	6/22/2019	76	8,298	6,008	4,418	248,705	4,779	0
13	6/22/2019	81	8,209	5,694	4,347	245,430	4,790	0
14	6/23/2019	82	8,286	5,814	4,532	242,493	4,935	0
15	6/23/2019	77	8,064	6,708	4,472	246,067	4,522	0
16	6/23/2019	81	8,084	6,325	4,773	245,375	4,380	0
17	6/23/2019	82	8,154	6,213	4,256	249,992	4,421	0
18	6/23/2019	76	8,115	6,447	4,416	246,948	4,513	0
19	6/23/2019	78	8,191	5,562	4,412	245,722	4,915	0
20	6/23/2019	77	8,027	5,718	4,567	246,877	4,580	0
21	6/24/2019	81	8,286	5,708	4,534	244,545	4,678	0
22	6/24/2019	86	8,016	6,236	4,484	248,098	4,260	0
23	6/24/2019	79	8,215	6,032	5,726	244,160	7,184	0
24	6/25/2019	82	8,012	5,712	4,419	241,604	4,822	0
25	6/26/2019	82	8,138	5,627	4,286	246,090	4,671	0
26	6/26/2019	81	7,923	6,350	4,461	247,159	5,084	0
27	6/27/2019	78	8,117	6,392	4,447	242,163	4,939	0
28	6/27/2019	73	8,049	6,705	4,390	245,887	4,643	0
29	6/27/2019	80	7,794	6,345	4,586	249,651	4,789	0
30	6/28/2019	83	8,137	6,458	4,586	245,785	4,780	0
31	6/28/2019	79	7,575	6,017	5,304	244,491	4,557	0
32	6/28/2019	82	7,755	6,259	4,641	243,831	4,856	0
33	6/28/2019	84	7,799	6,242	4,641	248,756	4,869	0
34	6/29/2019	86	7,871	4,969	4,629	246,071	4,955	0
35	6/29/2019	82	7,883	5,447	5,014	244,523	4,979	0
36	6/29/2019	82	7,460	5,962	4,673	242,100	4,637	0
37	6/29/2019	72	7,591	5,918	4,790	243,790	5,337	0
38	6/29/2019	72	7,516	5,434	4,376	244,184	5,499	0
39	6/30/2019	78	7,691	5,605	4,520	243,367	4,711	0
40	6/30/2019	85	7,700	5,452	4,701	244,539	4,744	0
41	6/30/2019	87	7,748	5,598	4,460	244,570	4,882	0
42	6/30/2019	89	7,859	5,910	4,420	243,377	4,743	0
43	6/30/2019	97	7,530	5,748	4,420	239,045	4,543	0
44	6/30/2019	86	7,541	4,982	4,768	243,315	4,979	0
45	7/1/2019	93	7,826	5,451	4,538	246,214	4,771	0
46	7/1/2019	89	7,389	5,077	4,237	247,395	4,963	0
47	7/1/2019	89	7,223	5,136	4,838	243,579	4,801	0
48	7/1/2019	87	7,616	5,068	4,599	242,293	4,771	0
49	7/1/2019	90	7,066	5,411	4,530	240,040	4,740	0
50	7/1/2019	92	7,434	5,255	4,439	243,242	4,706	0
51	7/1/2019	91	7,440	5,350	4,455	246,344	4,571	0
52	7/1/2019	94	7,523	5,275	4,519	245,952	4,372	0
53	7/2/2019	98	7,663	5,214	4,480	245,681	4,974	0
54	7/2/2019	93	7,249	5,467	4,430	242,263	4,749	0



55	7/2/2019	92	7,335	20	4,327	240,441	4,660	0
56	7/2/2019	98	7,452	5,513	4,396	243,303	4,709	0
57	7/2/2019	81	6,546	5,156	4,376	244,968	4,526	0
58	7/2/2019	80	7,478	5,714	4,659	243,582	4,323	0
59	7/2/2019	82	7,112	5,225	4,486	244,756	6,572	0
60	7/3/2019	85	6,843	5,363	4,942	247,148	4,329	0
61	7/3/2019	84	6,950	5,401	4,256	246,826	4,748	0
62	7/3/2019	90	7,099	5,456	4,712	244,157	4,236	0
63	7/3/2019	82	7,548	5,532	4,220	241,239	4,659	0
64	7/3/2019	91	7,229	5,651	4,322	241,550	4,650	0
65	7/3/2019	85	7,743	5,801	5,122	244,047	4,618	0
66	7/3/2019	97	7,231	5,181	4,696	244,489	4,109	0
67	7/3/2019	99	7,449	5,331	4,862	246,770	4,105	0
68	7/4/2019	97	7,447	5,530	4,531	245,762	4,245	0
69	7/4/2019	93	7,605	5,623	4,349	244,508	4,299	0
70	7/4/2019	89	7,586	5,671	4,271	249,193	4,607	0
71	7/4/2019	88	7,758	5,722	4,618	245,081	4,619	0
72	7/4/2019	85	7,603	5,679	4,116	244,573	4,505	0
73	7/5/2019	95	7,556	5,571	4,838	245,963	4,565	0
74	7/5/2019	97	7,468	5,178	4,602	250,268	3,532	0
75	7/5/2019	84	7,653	5,899	4,180	239,946	4,380	0
76	7/5/2019	80	7,823	6,288	4,268	245,387	4,452	0
77	7/5/2019	98	7,186	5,123	4,607	247,237	4,060	0
78	7/6/2019	94	7,347	5,657	4,618	243,369	3,898	0
79	7/6/2019	92	7,096	5,709	4,353	239,392	4,289	0
80	7/6/2019	92	7,096	5,823	4,278	246,042	4,447	0
81	7/6/2019	91	6,906	5,941	4,866	349,650	5,601	0
82	7/6/2019	100	6,555	5,446	4,398	245,710	4,175	0
83	7/7/2019	90	6,704	6,003	4,746	241,510	4,073	0
84	7/7/2019	82	7,325	6,237	4,207	229,302	4,549	0

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

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Job Start Date:	6/19/2019
Job End Date:	7/7/2019
State:	West Virginia
County:	Ohio
API Number:	47-069-00293-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Glenn Didriksen OH1 406
Latitude:	40.11393647
Longitude:	-80.59513068
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	648
Total Base Water Volume (gal):	16,834,371
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
SCAL16486A	Nalco	Scale Inhibitor		Listed Below			
Econo-CI200	SWN Well Services	Corrosion Inhibitor		Listed Below			



BIOC11219A	Nalco	Biocide		Listed Below					
				Listed Below					
Ecopol-FEAC	SWN Well Services	Iron Control		Listed Below					
				Listed Below					
SWN FRW-13LA	SWN Well Services	Friction Reducer		Listed Below					
				Listed Below					
HCL	SWN Well Services	Solvent		Listed Below					
				Listed Below					
Sand	SWN Well Services	Proppant		Listed Below					
				Listed Below					
Base Water	Operator	Base Fluid		Listed Below					
				Listed Below					
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.									
		Water		7732-18-5	100.00000	86.99002	Density = 8.345		
		Crystalline Silica, quartz		14808-60-7	100.00000	12.62185			
		Water		7732-18-5	85.00000	0.28907			
		Hydrochloric Acid		7647-01-0	15.00000	0.03813			
		Petroleum Distillates, Hydrotreated		64742-47-8	25.00000	0.02493			
		Methanol		67-56-1	60.00000	0.01550			
		Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium		68424-85-1	30.00000	0.00775			
		Chloride Glutaraldehyde		111-30-8	10.00000	0.00258			

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	Ethylene glycol	107-21-1	30.00000	0.00199
	Amine Triphosphate	Proprietary	30.00000	0.00199
	Ammonium Chloride	12125-02-9	2.00000	0.00199
	Alcohols, C12-1, ethoxylated	68551-12-2	1.50000	0.00150
	Oleic Acid	93-83-4	1.50000	0.00150
	Diethanolamide			
	Acetic Acid	64-19-7	37.50000	0.00051
	Methanol	67-56-1	80.00000	0.00031
	Citric Acid	77-92-9	22.50000	0.00030
	Oxyalkylated fatty acid	68951-67-7	9.67400	0.00004
	Fatty acids	61790-12-3	5.02700	0.00002
	Modified thiourea polymer	68527-49-1	4.74600	0.00002
	Potassium acetate	127-08-2	0.02200	0.00000
	Formaldehyde	50-00-0	0.00400	0.00000

\* 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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Environmental Protection

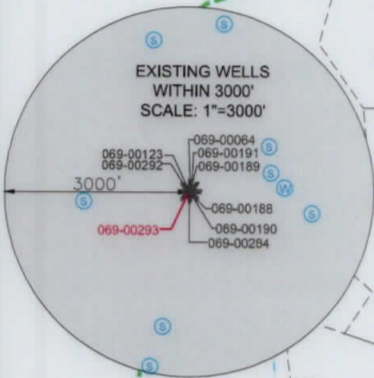
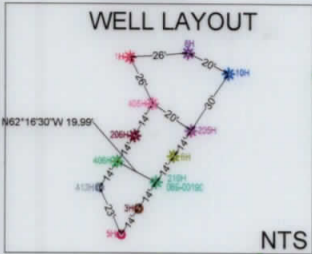
BOTTOM HOLE LATITUDE: 40°07'30" 959'

SURFACE HOLE LATITUDE: 40°07'30" 3300'

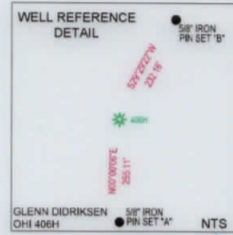
**JHA** SURVEYORS  
ENGINEERS  
ENVIRONMENTAL  
GIS MAPPING  
www.jhacompanies.com  
68011 Vineyard Road  
St. Clairsville, Ohio 43950  
740-695-6100

**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.
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.



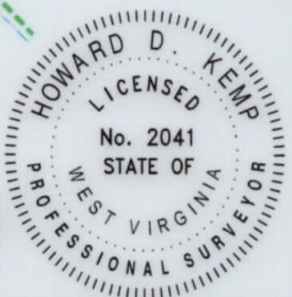
LINE	BEARING	DISTANCE
L1	S10°18'03"W	1407.94'
L2	S52°24'25"W	1114.82'



<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4440481.72 EASTING: 534502.07
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4440257.96 EASTING: 533730.19
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4437031.81 EASTING: 535231.28
<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4440481.72 EASTING: 534502.07
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4440309.41 EASTING: 533710.79
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4437032.09 EASTING: 535238.97

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



COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)

GLENN DIDRIKSEN OH  
OPERATOR'S WELL #: 406H  
API WELL #: 47 069 293  
STATE COUNTY PERMIT

WELL TYPE: OIL  WASTE DISPOSAL  PRODUCTION  DEEP  GAS  LIQUID INJECTION  STORAGE  SHALLOW   
WATERSHED: UPPER OHIO SOUTH ELEVATION: 1383.0'  
DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: VALLEY GROVE, WV  
SURFACE OWNER: GLENN DIDRIKSEN ACREAGE: ±47.93  
OIL & GAS ROYALTY OWNER: D&D FAST FOODS, INC ACREAGE: ±47.93  
DRILL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
CONVERT  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY) AS-DRILLED  
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,561' TVD 19,227' TMD

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

LEGEND:  
● EXISTING BOTTOM HOLE  
\* EXISTING / PRODUCING WELLHEAD  
LPL\* EXISTING LANDING POINT LOCATION  
● PROPOSED SURFACE HOLE / BOTTOM HOLE  
LPL\* PROPOSED LANDING POINT LOCATION  
— ACCESS ROAD  
- - - PUBLIC ROAD  
FLOOD PLAIN  
--- LEASE BOUNDARY  
AS-DRILLED PATH  
PROPOSED PATH

REVISIONS:  
DATE: 10-15-2019  
DRAWN BY: R.GRIMES  
SCALE: 1" = 2000'  
DRAWING NO: 2017-342  
WELL LOCATION PLAT

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	GLENN DIDRIKSEN (S) D&D FAST FOODS, INC (R)	03-L7-0042.0000
TRACT	SURFACE OWNER	TAX PARCEL
2	GLENN DIDRIKSEN	03-L7-0037.0000
3	RICHARD MORRISON	03-L7-0034.0000
4	ROGER A. & KAREN F. HUNT	03-L7-0024.0001
5	JAY R. & JODI A. HUNT	03-L10-0034.0000
6	RICHARD J., JR. & BETHELLEN ROY	03-L10-0031.0000
7	REBECCA L. STONE	03-L10-0030.0000
8	REBECCA L. STONE	03-L10-0029.0001
9	LINDA A. GILMORE, BARBARA J. BELL, DONNA M. ROBBINS, JOHN E. KOCHY & REBECCA L. STONE	03-L10-0029.0000
10	MICHAEL R. & KATHERINE A. PARSONS	03-L10-0035.0003
11	BRUCE A. & BRENDA J. PARSONS	03-L10-0035.0000
12	HARRY F., JR. & KRISTINE METZ	03-L10-0035.0002
13	CLARENCE A. A. WOOD	03-L10-0036.0004
14	MICHELLE L. HORBATAK	03-L10-0036.0003
15	DAVID A. & FLORENCE D. BLOWERS	03-L10-0036.0006
16	LANCE H., JR. & SHAENAN G. MILLER	03-L10-0036.0000
17	RONALD W. HOUCINS	03-L10-0036.0005
18	KIMBERLY ANN STEVENSON	03-L13-0005.0002
19	KIMBERLY STEVENSON	03-L13-0005.0005
20	RICHARD G. DEEVER	03-L13-0016.0000

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	RONALD HEYMAN TOMINACK	03-L7-0039.0002
B	DENISE KNOUSE-SNYDER & STEPHEN P. SNYDER	03-L7-0042.0001
C	ROBERT W. & DONNA LASCH (L/E); BARBARA JO HINERMAN	03-L10-0040.0000
D	ROBERT W. & DONNA LASCH (L/E); LINDA JEAN STONE	03-L10-0039.0000
E	J. MILTON & CAROLYN L. GUTMAN	03-L10-0039.0001
F	MATTHEW J. & JUDITH M. PADDEN	03-L10-0038.0000
G	CURTIS ROBERT HARRIS	03-L10-0037.0000
H	ARCH J. DIERINGER, JR.	03-L10-0045.0001
I	C.A. EVANS & R.A. DIERINGER	03-L13-0021.0001
J	ARCH J. DIERINGER, JR.	03-L13-0021.0000
K	ARLEY NEMO	03-L13-0020.0000
L	ARLEY NEMO	03-L13-0016.0001
M	RICHARD DEEVER	03-L13-0020.0001
N	GREGORY R. GANTZER	03-L13-0019.0000
O	ALVIN YODER	03-L13-0021.0002
P	ALVIN YODER	03-L13-0022.0000
Q	HORST LOHR	03-L13-0017.0000
R	THOMAS E. SEIFERT	03-L13-0017.0002
S	JAMES E. & MARY E. EBBERT	03-L13-0018.0000
T	GARY LEE & P.J. EBBERT	08-V8-0001.0000
U	NORMA J. & MICHAEL C. ELTRINGHAM	08-V8-0001.0001
V	A.R. & HILDA M. WALKER	08-V8-0005.0000
W	FRANKLIN COSTANZO	08-V8-0004.0000
X	ALBERT J. TRAGER	08-V610-0003.0000
Y	KARL L. SR. & CAROL J. KOSEM	08-V610-0002.0000
Z	KARL L. & C.J. KOSEM	08-V610-0002.0001
AA	PAUL R., SR. & C.G. TEMPLIN	08-V610-0001.0000
AB	GERALD T. & ANNA M. MOORE	06-T3-0015.0003
AC	CHERYL L. & H.E. HOLMAN	06-T3-0013.0000
AD	HARRY E. & C.L. HOLMAN	06-T3-0012.0000
AE	KEITH E. & C.J. BARON	03-L13-0015.0000
AF	GARY L. & MARY C. DEMERSKI	03-L13-0014.0000
AG	JAMES C. & D.L. KNIGHT	03-L13-0013.0000
AH	STEVEN P. SHEARER	03-L13-0012.0002
AI	JOLLY W., SR. & SARAH JANE WHEELER; ET AL	03-L13-0012.0000
AJ	JOLLY W., SR. & SARAH JANE WHEELER; ET AL	03-L13-0011.0001
AK	KEITH & CAROLYN BARON	03-L13-0011.0000
AL	KEITH E. & CAROLYN J. BARON	03-L13-0011.0002
AM	JAMES E., JR. & B.J. WHEELER	03-L13-0011.0002
AN	JAMES E., JR. & B.J. WHEELER	03-L13-0009.0000
AO	JAMES E. WHEELER, III & CHRISTINE WHEELER	03-L13-0008.0000
AP	JAMES E. WHEELER, III & CHRISTINE WHEELER	03-L13-0008.0001
AQ	RHONDA L. FLANEGIN	03-L13-0007.0000
AR	TYSON L. & VANESSA LOVERIDGE	03-L13-0006.0000
AS	OHIO COUNTY BOARD OF COMMISSIONERS	03-L13-0006.0003
AT	KIMBERLY STEVENSON, JAMES STEVENSON & BRENDA STEVENSON-DELGADO	03-L13-0006.0001
AU	JAMES ALAN STEVENSON	03-L13-0005.0004
AV	SANDRA LYNN STEVENSON-MOKROS	03-L13-0005.0003
AW	BRENDA J. & E. DELGADO	03-L13-0005.0001
AX	CECILEA DELGADO-MOORE & JOSHUA MOORE	03-L13-0005.0006
AY	RONALD W. HOUCINS	03-L13-0004.0003
AZ	OHIO COUNTY BOARD OF COMMISSIONERS	03-L13-0003.0001
BA	THOMAS R. & S.O. ABRAHAM	03-L10-0026.0000
BB	MICHELLE L. HORBATAK	03-L10-0036.0001
BC	CLARENCE A. WOOD & MILDRED L. WOOD	03-L10-0036.0007
BD	JOYCE E. KIMPEL	03-L10-0048.0000
BE	JEAN P. & L.P. LOUSTAU (RESV LF: CAROLINE L. BYRUM)	03-L10-0027.0000
BF	CHARLES & FLORA DIETRICH	03-L10-0035.0001
BG	MICHAEL R. & K.A. PARSONS	03-L10-0027.0002
BH	CAROLINE LOUSTAU-BYRUM	03-L10-0027.0003
BI	CAROLINE LOUSTAU-BYRUM	03-L10-0027.0001
BJ	GLEN L. & R.S. WALTERS	03-L10-0028.0000
BK	LUTZ F. & DORIS J. ALBRECHT	03-L10-0028.0005
BL	MICHAEL E. & EILEEN A. MURPHY	03-L10-0032.0000
BM	CHARLES WILLIAM MURPHY	03-L10-0010.0006
BN	CHARLES W. MURPHY, JR.	03-L10-0010.0001
BO	CHARLES CLARK MILTON, JR.	03-L10-0008.0000
BP	CHARLES W. STALNAKER & SANDRA B. STALNAKER	03-L7-0024.0000
BQ	RICHARD ARMSTRONG, JR.	03-L7-0025.0001
BR	GEORGE & ANITA WHITAKER	03-L7-0027.0000
BS	JAMES T. MCCLURE	03-L7-0033.0000
BT	PASQUALE J. DICESARE	03-L7-0034.0001
BU	JAMES E. SEKORAL	03-L7-0035.0000
BV	JAMES J. HARKINS, JR.	03-L7-0038.0000
BW	GARY CHARLES TOMINACK	03-L7-0039.0004

REVISIONS:

COMPANY:

**SWN**  
Production Company, LLC

**SWN**  $\frac{R^+}{A} \rightarrow V^+$   
Production Company™

OPERATOR'S GLENN DIDRIKSEN OHI

DATE: 10-15-2019

WELL #: 406H

DRAWN BY: R.GRIMES

DISTRICT:  
LIBERTY

COUNTY:  
OHIO

STATE:  
WV

SCALE: N/A

DRAWING NO: 2017-342

WELL LOCATION PLAT

PROPERTY NUMBER 2501165766

PAD ID 3001155800