

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

API 47-069-00306 County OHIO District LIBERTY
Quad BETHANY Pad Name GARY KESTNER OHI PAD Field/Pool Name PANHANDLE FIELD WEST
Farm name GARY KESTNER & TERRY KESTNER Well Number GARY KESTNER OHI 410H
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 4,444,349.821 Easting 539,077.737
Landing Point of Curve Northing 4,444,339.887 Easting 539,665.731
Bottom Hole Northing 4,441,288.574 Easting 540,926.758


Elevation (ft) 1,291.4' 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 9/09/2019 Date drilling commenced 1/18/2020 Date drilling ceased 2/01/2020
Date completion activities began 4/01/2020 Date completion activities ceased 5/26/2020
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 RECEIVED
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Freshwater depth(s) ft 635 Open mine(s) (Y/N) depths N AUG 14 2020
Salt water depth(s) ft 780 Void(s) encountered (Y/N) depths Y WV Department of
Coal depth(s) ft 635(COAL VOID FILLED WITH FW) Cavern(s) encountered (Y/N) depths N Environmental Protection
Is coal being mined in area (Y/N) N

Reviewed by:  B101320

API 47-069 - 00306 Farm name GARY KESTNER & TERRY KESTNER Well number GARY KESTNER OHI 410H

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	706	NEW	J-55/54.50#	517.2	Y, 27 BBLs
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2,048	NEW	J-55/36#		Y, 30 BBLs
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	18,228	NEW	P-110/20#		Y, 14
Tubing		2.875	7,313	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	24
Surface	CLASS A	672	15.60	1.20	806.4	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	730	15.60	1.19	868.7	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,090	15.60	1.21	3,738.9	SURFACE	24
Tubing							

Drillers TD (ft) 18,232'

Deepest formation penetrated MARCELLUS

Plug back procedure N/A

Loggers TD (ft) 18,232'

Plug back to (ft) N/A

Kick off depth (ft) 6,062'

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

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS AUG 14 2020

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

API 47- 069 - 00306 Farm name GARY KESTNER & TERRY KESTNER Well number GARY KESTNER OHI 410H

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- 069 - 00306 Farm name GARY KESTNER & TERRY KESTNER Well number GARY KESTNER OHI 410H

PRODUCING FORMATION(S)

DEPTHS

MARCELLUS 6,425' TVD 7,032' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump SHUT-IN PRESSURE Surface 2749 psi Bottom Hole psi DURATION OF TEST hrs

OPEN FLOW Gas 6,410 mcfpd Oil 864 bpd NGL bpd Water 552 bpd GAS MEASURED BY Estimated Orifice Pilot

Table with columns: LITHOLOGY/FORMATION, TOP DEPTH IN FT, BOTTOM DEPTH IN FT, TVD, MD, TOP DEPTH IN FT, BOTTOM DEPTH IN FT, DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC)

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 C&J ENERGY SERVICES Address 3900 RODGERDALE ROAD City HOUSTON State TX Zip 77042

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

Please insert additional pages as applicable.

Completed by Elizabeth Gee Signature Elizabeth Gee Title STAFF REGULATORY ANALYST Date 08/13/2020 Telephone 832-796-2873 RECEIVED Office of Oil and Gas Environmental Protection, WV Department of Environmental Protection AUG 14 2020

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

**GARY KESTNER OHI 410H
ATTACHMENT 1
PERF REPORT**

1	3/27/2020	18,142	18,050	36
2	4/8/2020	18,014	17,837	36
3	4/10/2020	17,800	17,627	36
4	4/12/2020	17,594	17,417	36
5	4/13/2020	17,384	17,207	36
6	4/13/2020	17,174	16,997	36
7	4/13/2020	16,964	16,787	36
8	4/13/2020	16,754	16,574	36
9	4/14/2020	16,546	16,367	36
10	4/14/2020	16,334	16,158	36
11	4/14/2020	16,124	15,947	36
12	4/14/2020	15,914	15,737	36
13	4/15/2020	15,704	15,527	36
14	4/15/2020	15,494	15,317	36
15	4/15/2020	15,284	15,107	36
16	4/15/2020	15,073	14,897	36
17	4/15/2020	14,864	14,687	36
18	4/16/2020	14,654	14,477	36
19	4/16/2020	14,444	14,267	36
20	4/16/2020	14,234	14,061	36
21	4/16/2020	14,024	13,847	36
22	4/17/2020	13,814	13,637	36
23	4/17/2020	13,604	13,427	36
24	4/17/2020	13,394	13,217	36
25	4/18/2020	13,184	13,007	36
26	4/18/2020	12,974	12,796	36
27	4/18/2020	12,764	12,587	36
28	4/18/2020	12,554	12,377	36
29	4/19/2020	12,346	12,167	36
30	4/19/2020	12,134	11,957	36
31	4/19/2020	11,924	11,747	36
32	4/19/2020	11,714	11,537	36
33	4/20/2020	11,504	11,327	36
34	4/20/2020	11,294	11,117	36
35	4/20/2020	11,084	10,911	36
36	4/20/2020	10,874	10,697	36
37	4/22/2020	10,664	10,487	36
38	4/22/2020	10,454	10,277	36
39	4/22/2020	10,244	10,067	36
40	4/23/2020	10,034	9,857	36
41	4/23/2020	9,824	9,650	30
42	4/23/2020	9,614	9,437	30
43	4/24/2020	9,402	9,227	30

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ATTACHMENT 1
PERF REPORT**

44	4/24/2020	9,194	9,017	30
45	4/24/2020	8,984	8,807	30
46	4/24/2020	8,774	8,597	30
47	4/24/2020	8,564	8,390	30
48	4/25/2020	8,354	8,177	30
49	4/25/2020	8,144	7,967	30
50	4/25/2020	7,929	7,757	27
51	4/25/2020	7,724	7,547	27
52	4/25/2020	7,514	7,337	27
53	4/26/2020	7,304	7,127	27

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GARY KESTNER OHI 410H
ATTACHMENT 2
STIM REPORT

1	4/2/2020	86.6	7,907	6,347	3,932	321,670	8,504	0
2	4/10/2020	87.6	8,299	6,841	4,914	291,185	8,990	0
3	4/12/2020	91.8	8,297	6,438	4,346	314,915	8,876	0
4	4/13/2020	89.3	8,232	5,888	4,382	306,100	9,602	0
5	4/13/2020	87.4	8,228	6,103	4,172	314,018	9,212	0
6	4/13/2020	87.9	8,228	6,749	4,470	318,128	9,158	0
7	4/13/2020	90.6	8,398	6,331	4,505	317,060	8,745	0
8	4/14/2020	95.5	8,543	7,074	4,471	312,375	8,990	0
9	4/14/2020	93.1	8,392	6,338	4,548	312,420	8,538	0
10	4/14/2020	90.3	8,402	6,609	4,501	318,220	8,695	0
11	4/14/2020	91.2	8,345	6,726	4,561	312,915	8,873	0
12	4/14/2020	95.2	8,393	5,987	4,404	313,705	8,657	0
13	4/15/2020	96.3	8,378	6,281	4,398	313,750	8,608	0
14	4/15/2020	99.7	8,326	6,535	4,504	315,665	8,645	0
15	4/15/2020	99.2	8,231	6,453	4,633	315,335	8,438	0
16	4/15/2020	99.8	8,223	5,742	4,560	316,025	8,730	0
17	4/15/2020	98.7	7,962	5,829	4,480	313,915	8,643	0
18	4/16/2020	100	7,993	5,678	4,528	314,195	8,592	0
19	4/16/2020	99.9	7,971	6,064	4,500	314,230	8,386	0
20	4/16/2020	99.8	7,865	5,815	4,444	316,410	8,657	0
21	4/17/2020	100	7,797	5,616	4,378	316,225	8,621	0
22	4/17/2020	100	8,020	6,325	4,506	314,900	8,851	0
23	4/17/2020	100	7,975	6,393	4,412	315,460	8,619	0
24	4/17/2020	100	7,960	5,673	4,536	315,565	8,904	0
25	4/18/2020	90	7,819	5,980	4,524	314,385	8,482	0
26	4/18/2020	96	7,703	6,331	4,550	313,695	8,468	0
27	4/18/2020	99.5	7,992	6,414	4,459	313,220	8,426	0
28	4/19/2020	99.4	7,953	6,245	4,257	312,475	8,489	0
29	4/19/2020	100	8,022	6,762	4,282	314,565	8,497	0
30	4/19/2020	99	8,015	6,423	4,460	311,060	8,397	0
31	4/19/2020	99.6	7,877	6,025	4,244	314,340	8,509	0
32	4/20/2020	99.3	7,698	6,199	4,205	314,910	8,475	0
33	4/20/2020	100	7,633	5,992	4,431	313,100	8,385	0
34	4/20/2020	99.6	7,688	6,585	4,307	313,910	8,483	0
35	4/20/2020	98.6	7,942	6,230	4,339	315,810	8,440	0
36	4/22/2020	99	7,883	6,184	4,390	312,805	8,389	0
37	4/22/2020	100	7,596	6,392	4,449	312,215	8,498	0
38	4/22/2020	100	7,597	3,599	4,443	311,815	8,362	0
39	4/23/2020	99.3	7,530	6,472	4,388	315,885	8,358	0
40	4/23/2020	100.1	7,594	6,261	4,328	318,800	8,307	0
41	4/23/2020	99.8	7,264	6,089	4,310	312,020	8,348	0
42	4/24/2020	99.2	7,650	6,100	4,244	318,315	8,339	0
43	4/24/2020	100	7,551	5,979	4,329	312,765	8,277	0
44	4/24/2020	100	7,454	6,036	4,375	310,965	8,262	0
45	4/24/2020	100.6	7,546	6,181	4,244	310,985	8,454	0
46	4/24/2020	99.9	7,204	5,753	4,321	312,125	8,385	0
47	4/25/2020	100	7,256	6,196	4,448	318,075	8,364	0
48	4/25/2020	100	7,317	6,053	4,303	316,870	8,337	0
49	4/25/2020	100	7,268	5,597	4,390	312,268	8,213	0
50	4/25/2020	100.1	7,417	6,058	4,255	314,950	8,437	0
51	4/25/2020	99.7	7,471	5,913	4,201	315,680	8,299	0
52	4/26/2020	98.8	7,528	5,990	4,253	314,945	8,435	0
53	4/26/2020	99.5	7,378	6,027	4,199	295,295	8,226	0

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Southwestern Energy

Well Name:

Gary Kestner OHI 410H

47069003060000

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	635.00	635.00	
Top of Salt Water	780.00	780.00	NA	NA	
Pittsburgh Coal	635.00	635.00	646.00	646.00	
Pottsville (ss)	770.00	770.00	1386.00	1386.00	
Raven Cliff (ss)	1386.00	1386.00	1850.00	1850.00	
Big Injun (ss)	1850.00	1850.00	2363.00	2363.00	
Berea (siltstone)	2365.00	2363.00	5909.00	5839.00	
Rhinestreet (shale)	5909.00	5839.00	6221.00	6116.00	
Cashqua (shale)	6221.00	6116.00	6660.00	6179.00	
Middlesex (shale)	6660.00	6179.00	6762.00	6258.00	
Burket (shale)	6762.00	6258.00	6787.00	6276.00	
Tully (ls)	6787.00	6276.00	6967.00	6395.00	
Mahantango (shale)	6967.00	6395.00	7032.00	6425.00	
Marcellus (shale)	7032.00	6425.00	NA	NA	GAS

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date: 4/2/2020
 Job End Date: 4/26/2020
 State: West Virginia
 County: Ohio
 API Number: 47-069-00306-00-00
 Operator Name: Southwestern Energy
 Well Name and Number: Gary Kestner OH1 410
 Latitude: 40.14858500
 Longitude: -80.54120400
 Datum: NAD83
 Federal Well: NO
 Indian Well: NO
 True Vertical Depth: 6,505
 Total Base Water Volume (gal): 18,954,536
 Total Base Non Water Volume: 0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Halliburton	Base Fluid					
Ingredients	Listed Above	Listed Above	Water	7732-18-5	100.00000	89.99530	Density = 8.34
Ingredients	Listed Above		Water	7732-18-5	100.00000	0.41266	

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					Acid	FSTI	FSTI HCl
			Listed Below				LCA-1
			Listed Below		Solvent	Halliburton	
			Listed Below				LD-2950
			Listed Below		Friction Reducer	MultiChem	
			Listed Below		Scale Control	MultiChem	LEGEND(TM) LD-7750W
			Listed Below				
			Listed Below		Corrosion Inhibitor	FSTI	FSTI-CI-02
			Listed Below		Additive	MultiChem	MC MX 8-4743
			Listed Below				
			Listed Below		Proppant	Halliburton	Sand-Common White-100 Mesh, SSA-2
			Listed Below				
			Listed Below		Iron Control Agent	FSTI	FSTI-IC-002
			Listed Below				
			Listed Below		Proppant	Halliburton	Sand-Premium White-40/70

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Crystalline silica, quartz	14808-60-7	100.00000	9.46325	Compound	Proprietary	60.00000	0.05152		
Complex Amine	Proprietary	60.00000							
Hydrochloric acid	7647-01-0	36.00000	0.03367						
Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02576						
Sodium nitrate	7631-99-4	60.00000	0.02365						
Methanol	67-56-1	60.00000	0.00514						
Ethoxylated alcohols	Proprietary	5.00000	0.00429						
Sodium molybdate	10102-40-6	5.00000	0.00197						
Poly(oxy-1,2-ethanediy), alpha-tridecyl-omega-hydroxy-, branched	69011-36-5	1.00000	0.00086						
Adipic acid	124-04-9	1.00000	0.00086						
Acetic acid	64-19-7	60.00000	0.00071						
Hydrotreated distillate	Proprietary	100.00000	0.00051						
Citric acid	77-92-9	40.00000	0.00047						
Sodium chloride	7647-14-5	5.00000	0.00047						
Phosphoric Acid Salt	Proprietary	5.00000	0.00043						
Ethylene glycol	107-21-1	40.00000	0.00016						
1-Decanol	112-30-1	19.00000	0.00008						
Cinnamaldehyde	104-55-2	19.00000	0.00008						
Poly(oxy-1,2-ethandiy), alpha-(nonylphenyl)-omega-hydroxy-	9016-45-9	19.00000	0.00008						
N,N-Dimethylformamide	68-12-2	19.00000	0.00008						
Tar bases, quinoline derivatives, benzyl chloride- quaternized	72480-70-7	10.00000	0.00004						
Isopropyl alcohol	67-63-0	10.00000	0.00004						
2-Butoxyethanol	111-76-2	10.00000	0.00004						
Yeast extract	8013-01-2	0.10000	0.00004						

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Listed Below

			72-17-3	0.10000	0.00004
			127-09-3	0.10000	0.00004
			7778-77-0	0.10000	0.00004
			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(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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SWN PRODUCTION COMPANY, LLC

Location: Ohio County, WV

Field: Ohio

Facility: Gary Kestner OHI Pad

Slot: Slot #410

Well: Gary Kestner OHI 410H

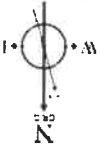
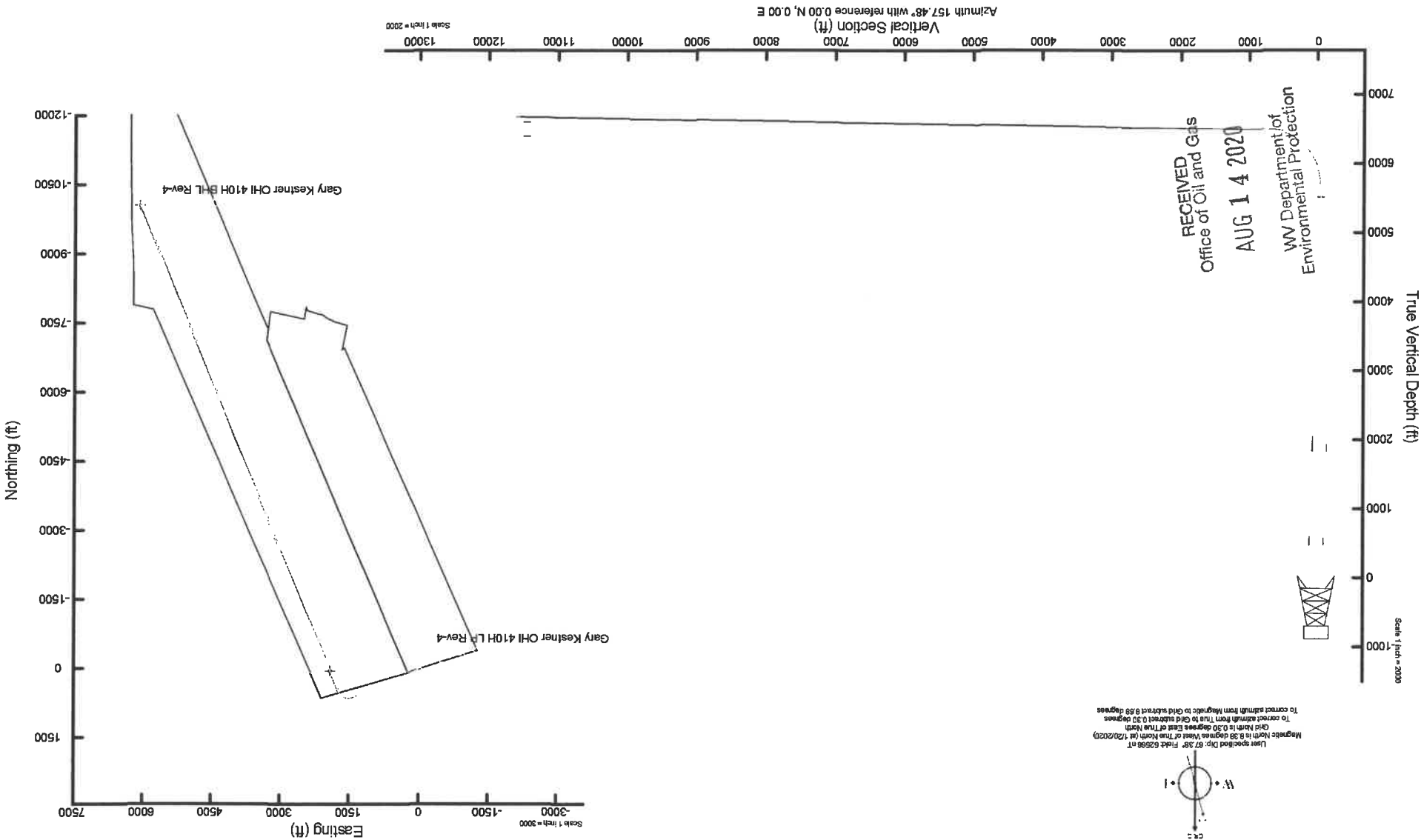
Wellbore: Gary Kestner OHI 410H PWB

Grid System: NAD83 / UTM Zone 17 North, US Feet	Grid Reference: Grid north
True vertical depths are referenced to SDC 41 (RKB)	North Reference: Grid north
Reference wellbore depths are referenced to SDC 41 (RKB)	Scale: True distance
SDC 41 (RKB) to Mean Sea Level: 1317.2 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (at Slot #410): -1291.2 feet	Depths are in feet
Center wellbore Mds are referenced to each party's default MD datum	Created by: stanjon on 2020-02-04; Database: WV_MPL_EASTERNUS_Leh

Baker Hughes

SW

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude
Gary Kestner OHI Pad	176693.470	14581161.307	40°08'55.010"N
Slot	Local N (ft)	Local E (ft)	Local E (US ft)
Slot #410	-10.27	30.75	176624.210
SDC 41 (RKB) to Ground level (At Slot #410)	26ft		
Mean Sea Level to Ground level (At Slot #410)	-1291.2ft		
SDC 41 (RKB) to Mean Sea Level	1317.2ft		
Comments			



User specified Dip: 87.89° Field: 62566 RT
Magnetic North is 8.96 degrees West of True North (for 1/20/2020)
To correct azimuth from True to Grid subtract 0.90 degrees
Grid North is 0.90 degrees East of True North
To correct azimuth from Magnetic to Grid subtract 8.89 degrees

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Actual Wellpath Report

Gary Kestner OHI 410H AWP Proj: 18232

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Baker Hughes

Operator	SWN PRODUCTION COMPANY, LLC	Well	Gary Kestner OHI 410H
Field	Ohio	API/Legal	
Facility	Gary Kestner OHI Pad	Wellbore	Gary Kestner OHI 410H AWB
Slot	Slot #410		

WELLPATH DATA (227 stations) † = interpolated, ‡ = extrapolated station															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	[°]	[°]	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	[°]	(ft/100ft)	(ft/100ft)	(°/100ft)
0.00	0.000	93.450	0.00	0.00	0.00	0.00	1768624.21	14581171.04	40°08'54.9069"N	80°32'28.3347"W	0.00	0.00	0.00	0.00	0.00
26.00	0.000	93.450	26.00	0.00	0.00	0.00	1768624.21	14581171.04	40°08'54.9069"N	80°32'28.3347"W	0.00	0.00	0.00	0.00	0.00
100.00	0.420	93.450	100.00	0.12	-0.02	0.27	1768624.48	14581171.03	40°08'54.9068"N	80°32'28.3312"W	0.27	0.27	93.450	0.57	0.00
125.00	0.440	79.930	125.00	0.18	-0.01	0.46	1768624.67	14581171.02	40°08'54.9069"N	80°32'28.3288"W	0.46	0.66	90.634	0.41	0.08
150.00	0.480	84.550	150.00	0.23	0.02	0.66	1768624.87	14581171.06	40°08'54.9071"N	80°32'28.3262"W	0.66	0.66	88.106	0.22	0.16
175.00	0.590	89.980	175.00	0.31	0.03	0.89	1768625.10	14581171.07	40°08'54.9072"N	80°32'28.3232"W	0.89	0.89	87.958	0.48	0.44
200.00	0.490	86.540	200.00	0.40	0.04	1.12	1768625.33	14581171.08	40°08'54.9073"N	80°32'28.3202"W	1.12	1.12	88.055	0.42	-0.40
225.00	0.460	87.680	224.99	0.46	0.05	1.33	1768625.54	14581171.09	40°08'54.9073"N	80°32'28.3175"W	1.33	1.33	87.905	0.13	-0.12
250.00	0.450	86.320	249.99	0.53	0.06	1.53	1768625.74	14581171.10	40°08'54.9074"N	80°32'28.3150"W	1.53	1.53	87.789	0.06	-0.04
275.00	0.570	92.220	274.99	0.61	0.06	1.75	1768625.96	14581171.10	40°08'54.9074"N	80°32'28.3121"W	1.75	1.75	88.021	0.52	0.48
300.00	0.530	92.340	299.99	0.72	0.05	1.99	1768626.20	14581171.09	40°08'54.9073"N	80°32'28.3090"W	1.99	1.99	88.533	0.16	-0.16
325.00	0.520	104.330	324.99	0.83	0.02	2.22	1768626.43	14581171.06	40°08'54.9070"N	80°32'28.3061"W	2.22	2.22	89.530	0.44	-0.04
350.00	0.510	104.900	349.99	0.97	-0.04	2.43	1768626.64	14581171.00	40°08'54.9064"N	80°32'28.3033"W	2.43	2.43	90.906	0.04	-0.04
375.00	0.550	110.500	374.99	1.12	-0.11	2.65	1768626.86	14581170.93	40°08'54.9057"N	80°32'28.3005"W	2.66	2.66	92.355	0.26	0.16
400.00	0.480	118.310	399.99	1.28	-0.20	2.86	1768627.07	14581170.84	40°08'54.9048"N	80°32'28.2979"W	2.87	2.87	94.018	0.40	-0.28
425.00	0.530	121.410	424.99	1.45	-0.31	3.05	1768627.26	14581170.73	40°08'54.9037"N	80°32'28.2954"W	3.07	3.07	95.818	0.23	0.20
450.00	0.600	118.210	449.99	1.65	-0.43	3.26	1768627.47	14581170.61	40°08'54.9025"N	80°32'28.2927"W	3.29	3.29	97.556	0.31	0.28
475.00	0.910	121.190	474.98	1.91	-0.60	3.55	1768627.76	14581170.44	40°08'54.9008"N	80°32'28.2890"W	3.60	3.60	99.559	1.25	1.24
500.00	0.950	129.250	499.98	2.25	-0.83	3.88	1768628.09	14581170.21	40°08'54.8985"N	80°32'28.2848"W	3.97	3.97	102.099	0.55	0.16
525.00	1.340	134.680	524.98	2.71	-1.17	4.25	1768628.46	14581169.87	40°08'54.8952"N	80°32'28.2801"W	4.40	4.40	105.378	1.62	1.56
550.00	1.320	132.620	549.97	3.24	-1.57	4.67	1768628.88	14581169.47	40°08'54.8912"N	80°32'28.2747"W	4.92	4.92	108.579	0.21	-0.08
575.00	1.370	127.270	574.96	3.76	-1.94	5.12	1768629.32	14581169.10	40°08'54.8875"N	80°32'28.2689"W	5.47	5.47	110.810	0.54	0.20
600.00	1.430	136.630	599.95	4.31	-2.35	5.57	1768629.78	14581168.69	40°08'54.8834"N	80°32'28.2631"W	6.05	6.05	112.901	0.94	0.24
625.00	1.500	142.360	624.95	4.91	-2.84	5.98	1768630.19	14581168.20	40°08'54.8786"N	80°32'28.2578"W	6.62	6.62	115.380	0.65	0.28
650.00	1.620	147.660	649.94	5.58	-3.40	6.37	1768630.58	14581167.65	40°08'54.8730"N	80°32'28.2529"W	7.22	7.22	118.057	0.75	0.48
660.00	1.480	150.180	659.93	5.84	-3.63	6.51	1768630.72	14581167.41	40°08'54.8708"N	80°32'28.2511"W	7.45	7.45	119.121	1.56	-1.40
788.00	1.110	152.670	787.90	8.72	-6.16	7.90	1768632.11	14581164.88	40°08'54.8456"N	80°32'28.2333"W	10.02	10.02	127.949	0.29	-0.29
878.00	1.270	61.930	877.89	9.49	-6.47	9.18	1768633.39	14581164.57	40°08'54.8425"N	80°32'28.2169"W	11.23	11.23	125.159	1.89	0.18
969.00	2.810	24.640	969.83	7.88	-3.97	11.00	1768635.21	14581167.08	40°08'54.8672"N	80°32'28.1933"W	11.70	11.70	109.821	2.15	1.69
1060.00	5.190	17.970	1059.60	3.23	1.98	13.20	1768637.41	14581173.02	40°08'54.9258"N	80°32'28.1645"W	13.35	13.35	81.481	2.66	2.62

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Baker Hughes

Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
Facility	Gary Kestner OHI Pad
Slot	Slot #410
	Gary Kestner OHI 410H AWP
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WELLPATH DATA (227 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
1150.00	6.750	1149.11	-4.37	11.07	15.29	1768639.49	14581182.11	40°08'55.0152"N	80°32'28.1370"W	18.88	54.086	2.01	1.73	-9.92	
1241.00	6.060	11470	1239.54	-12.91	21.06	1768641.29	14581192.10	40°08'55.1142"N	80°32'28.1133"W	27.12	39.048	0.81	-0.76	2.67	
1332.00	4.490	15460	1330.16	-19.70	29.20	1768643.19	14581200.23	40°08'55.1946"N	80°32'28.0882"W	34.84	33.035	1.77	-1.73	4.38	
1422.00	4.130	18010	1419.90	-24.94	35.68	1768645.13	14581206.71	40°08'55.2585"N	80°32'28.0628"W	41.37	30.397	0.45	-0.40	2.83	
1513.00	3.490	15070	1510.70	-29.63	41.47	1768646.87	14581212.50	40°08'55.3156"N	80°32'28.0401"W	47.26	28.657	0.74	-0.70	-3.23	
1603.00	3.130	11670	1600.55	-33.83	46.52	1768648.08	14581217.55	40°08'55.3655"N	80°32'28.0241"W	52.29	27.165	0.46	-0.40	-3.78	
1694.00	1.810	20520	1691.46	-36.94	50.30	1768649.08	14581221.32	40°08'55.4028"N	80°32'28.0109"W	56.12	26.318	1.51	-1.45	9.73	
1785.00	1.070	34470	1782.44	-38.45	52.35	1768650.07	14581223.37	40°08'55.4229"N	80°32'27.9981"W	58.39	26.293	0.89	-0.81	15.33	
1875.00	0.460	39720	1872.43	-39.08	53.32	1768650.77	14581224.34	40°08'55.4325"N	80°32'27.9890"W	59.57	26.489	0.68	-0.66	5.83	
1966.00	0.260	130480	1963.43	-39.06	53.47	1768651.16	14581224.49	40°08'55.4339"N	80°32'27.9839"W	59.88	26.761	0.58	-0.22	99.74	
2000.00	0.390	154200	1997.43	-38.88	53.31	1768651.27	14581224.33	40°08'55.4324"N	80°32'27.9825"W	59.79	26.921	0.54	0.38	69.76	
2073.00	0.500	137500	2070.42	-38.33	52.85	1768651.59	14581223.87	40°08'55.4278"N	80°32'27.9784"W	59.53	27.398	0.23	0.15	-22.88	
2164.00	0.470	164140	2161.42	-37.59	52.20	1768651.96	14581223.22	40°08'55.4214"N	80°32'27.9737"W	59.13	28.007	0.25	-0.03	29.27	
2254.00	0.400	138410	2251.42	-36.92	51.61	1768652.27	14581222.63	40°08'55.4155"N	80°32'27.9697"W	58.75	28.544	0.23	-0.08	-28.59	
2345.00	0.420	172780	2342.41	-36.33	51.17	1768652.75	14581222.19	40°08'55.4111"N	80°32'27.9636"W	58.60	29.158	0.09	0.02	-11.68	
2436.00	2.550	73530	2433.38	-35.83	51.54	1768654.95	14581222.56	40°08'55.4147"N	80°32'27.9352"W	60.02	30.824	2.56	2.34	-59.62	
2526.00	3.310	67080	2523.26	-35.64	53.12	1768659.26	14581224.14	40°08'55.4301"N	80°32'27.8796"W	63.65	33.431	0.92	0.84	-7.17	
2617.00	3.460	63610	2614.10	-35.84	55.36	1768664.14	14581226.38	40°08'55.4520"N	80°32'27.8166"W	68.27	35.812	0.28	0.16	-3.81	
2708.00	5.710	59490	2704.81	-36.66	58.88	1768670.50	14581229.90	40°08'55.4864"N	80°32'27.7344"W	74.91	38.183	2.50	2.47	-4.53	
2798.00	6.490	56790	2794.30	-38.22	63.94	1768678.61	14581234.96	40°08'55.5360"N	80°32'27.6296"W	83.97	40.401	0.92	0.87	-3.00	
2889.00	7.280	58630	2884.64	-40.06	69.76	1768687.83	14581240.77	40°08'55.5930"N	80°32'27.5104"W	94.43	42.376	0.90	0.87	2.02	
2980.00	8.330	63720	2974.80	-41.38	75.68	1768698.66	14581246.69	40°08'55.6510"N	80°32'27.3705"W	106.18	44.542	1.38	1.15	5.59	
3070.00	10.770	69290	3063.55	-41.55	81.54	1768712.37	14581252.55	40°08'55.7082"N	80°32'27.1935"W	120.11	47.244	2.90	2.71	6.19	
3161.00	13.720	69150	3152.47	-40.96	88.39	1768730.40	14581259.40	40°08'55.7750"N	80°32'26.9608"W	138.20	50.239	3.24	3.24	-0.15	
3252.00	15.400	68270	3240.54	-40.48	96.71	1768751.71	14581267.71	40°08'55.8561"N	80°32'26.6858"W	160.06	52.830	1.86	1.85	-0.97	
3342.00	15.620	65240	3327.26	-40.79	106.20	1768773.80	14581277.20	40°08'55.9488"N	80°32'26.4005"W	183.51	54.637	0.93	0.24	-3.37	
3433.00	17.620	67710	3414.46	-41.21	116.56	1768797.66	14581287.56	40°08'55.0499"N	80°32'26.0924"W	209.04	56.109	2.33	2.20	2.71	
3524.00	19.860	70820	3500.63	-40.26	126.87	1768825.00	14581297.86	40°08'55.1503"N	80°32'25.7396"W	237.58	57.724	2.69	2.46	3.42	
3614.00	22.010	71360	3584.69	-38.23	137.28	1768855.41	14581308.27	40°08'55.2517"N	80°32'25.3471"W	268.96	59.309	2.40	2.39	0.60	
3705.00	23.960	69500	3668.46	-36.42	149.20	1768888.87	14581320.18	40°08'55.3678"N	80°32'24.9153"W	303.91	60.597	2.29	2.14	-2.04	

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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(US ft)	(ft)	(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)

3795.00	25.610	68.060	3750.17	-35.58	162.87	299.92	1768924.02	14581333.85	40°08'56.5011"N	80°32'24.4616"W	341.29	61.496	1.95	1.83	-1.60
3886.00	27.530	66.350	3831.55	-35.79	178.66	337.43	1769001.90	14581349.63	40°08'56.6525"N	80°32'23.9775"W	381.81	62.101	2.27	2.11	-1.88
3977.00	28.820	66.640	3911.77	-36.53	195.79	376.84	1769000.90	14581366.76	40°08'56.8225"N	80°32'23.4690"W	424.66	62.545	1.43	1.42	0.32
4067.00	31.080	66.490	3989.74	-37.25	213.66	418.06	1769042.11	14581384.62	40°08'56.9970"N	80°32'22.9369"W	469.49	62.929	2.51	2.51	-0.17
4158.00	32.320	67.560	4067.17	-37.62	232.32	462.08	1769086.12	14581403.27	40°08'57.1791"N	80°32'22.3687"W	517.20	63.308	1.50	1.36	1.18
4248.00	33.510	67.630	4142.72	-37.52	250.96	507.30	1769131.31	14581421.90	40°08'57.3609"N	80°32'21.7853"W	565.98	63.679	1.32	1.32	0.08
4339.00	32.500	65.580	4219.03	-38.27	270.63	552.79	1769176.79	14581441.56	40°08'57.5530"N	80°32'21.1981"W	615.48	63.915	1.65	-1.11	-2.25
4430.00	32.850	66.830	4295.63	-39.36	290.44	597.74	1769221.72	14581461.37	40°08'57.7465"N	80°32'20.6179"W	664.57	64.085	0.84	0.38	1.37
4520.00	31.490	65.670	4371.82	-40.38	309.73	641.60	1769265.56	14581480.65	40°08'57.9349"N	80°32'20.0518"W	712.45	64.231	1.66	-1.51	-1.29
4611.00	33.290	66.060	4448.66	-41.75	329.66	686.09	1769310.03	14581500.57	40°08'58.1295"N	80°32'19.4776"W	761.18	64.336	1.99	1.98	0.43
4702.00	32.930	65.360	4524.88	-43.28	350.11	731.39	1769355.32	14581521.01	40°08'58.3292"N	80°32'18.8928"W	810.87	64.420	0.58	-0.40	-0.77
4792.00	32.710	68.390	4600.52	-43.80	369.26	776.24	1769400.15	14581540.16	40°08'58.5162"N	80°32'18.3140"W	859.60	64.559	1.84	-0.24	3.37
4883.00	31.190	67.630	4677.73	-43.35	387.29	820.89	1769444.79	14581558.18	40°08'58.6921"N	80°32'17.7378"W	907.67	64.743	1.73	-1.67	-0.84
4973.00	32.500	66.940	4754.18	-43.52	405.63	864.69	1769488.57	14581576.51	40°08'58.8711"N	80°32'17.1725"W	955.11	64.869	1.51	1.46	-0.77
5064.00	34.280	67.500	4830.16	-43.74	425.01	910.87	1769534.73	14581595.89	40°08'59.0602"N	80°32'16.5766"W	1005.14	64.986	1.99	1.96	0.62
5154.00	33.320	66.470	4904.95	-44.16	444.58	956.95	1769580.79	14581615.45	40°08'59.2512"N	80°32'15.9819"W	1055.18	65.081	1.24	-1.07	-1.14
5245.00	33.860	65.260	4980.75	-45.59	465.17	1002.89	1769626.71	14581636.03	40°08'59.4523"N	80°32'15.3889"W	1105.52	65.117	0.95	0.59	-1.33
5336.00	34.570	65.170	5056.00	-47.61	486.62	1049.34	1769673.15	14581657.47	40°08'59.6619"N	80°32'14.7892"W	1156.69	65.121	0.78	0.78	-0.10
5426.00	32.620	63.330	5130.97	-50.39	508.23	1094.20	1769717.99	14581679.08	40°08'59.8732"N	80°32'14.2101"W	1206.47	65.086	2.44	-2.17	-2.04
5517.00	31.980	65.290	5207.89	-53.09	529.32	1138.01	1769761.78	14581700.15	40°09'0.0793"N	80°32'13.6445"W	1255.09	65.056	1.35	-0.70	2.15
5608.00	31.890	68.170	5285.12	-53.72	548.33	1182.22	1769805.97	14581719.16	40°09'0.2649"N	80°32'13.0740"W	1303.19	65.117	1.68	-0.10	3.16
5698.00	32.290	69.260	5361.37	-52.69	565.68	1226.77	1769850.51	14581736.51	40°09'0.4341"N	80°32'12.4991"W	1350.91	65.245	0.78	0.44	1.21
5789.00	31.560	68.610	5438.61	-51.46	582.98	1271.67	1769895.40	14581753.79	40°09'0.6027"N	80°32'11.9197"W	1398.93	65.372	0.89	-0.80	-0.71
5856.00	29.930	66.410	5496.19	-51.43	596.06	1303.32	1769927.03	14581766.87	40°09'0.7303"N	80°32'11.5112"W	1433.16	65.423	2.96	-2.43	-3.28
5946.00	31.700	64.060	5573.48	-53.26	615.39	1345.17	1769968.86	14581786.20	40°09'0.9192"N	80°32'10.9711"W	1479.25	65.417	2.38	1.97	-2.61
6037.00	31.680	66.240	5650.92	-55.20	635.48	1388.54	1770012.22	14581806.28	40°09'1.1155"N	80°32'10.4112"W	1527.05	65.408	1.26	-0.02	2.40
6128.00	31.600	77.550	5728.46	-51.55	650.26	1433.73	1770057.39	14581821.05	40°09'1.2592"N	80°32'9.8282"W	1574.30	65.604	6.51	-0.09	12.43
6218.00	31.680	88.060	5805.14	-39.11	656.15	1480.41	1770104.05	14581826.94	40°09'1.3150"N	80°32'9.2267"W	1619.30	66.096	6.12	0.09	11.68
6309.00	31.390	102.480	5882.82	-17.08	651.83	1527.50	1770151.12	14581822.62	40°09'1.2699"N	80°32'8.6206"W	1660.76	66.891	8.28	-0.32	15.85
6399.00	31.690	114.970	5959.60	13.82	636.77	1571.86	1770195.47	14581807.56	40°09'1.1187"N	80°32'8.0503"W	1695.94	67.947	7.26	0.33	13.88

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Gary Kestner OHI 410H AWP Proj: 18232

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Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
Facility	Gary Kestner OHI Pad
Slot	Slot #410
	Gary Kestner OHI 410H AWB
	Wellbore
	API/Legal
	Gary Kestner OHI 410H
	Well

WELLPATH DATA (227 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)
6490.00	31.660	126.900	6037.12	52.04	612.32	1612.67	1770236.26	14581783.12	40°09'0.8750"N	80°32'7.5265"W	1725.00	69.209	6.88	-0.03	13.11
6580.00	33.270	137.850	6113.12	95.66	579.80	1648.15	1770271.73	14581750.62	40°09'0.5518"N	80°32'7.0717"W	1747.16	70.619	6.76	1.79	12.17
6611.00	37.040	146.450	6187.56	146.13	538.41	1680.08	1770303.65	14581709.25	40°09'0.1412"N	80°32'6.6633"W	1764.25	72.231	6.83	4.14	9.45
6762.00	41.940	152.860	6257.79	203.40	488.46	1709.13	1770332.69	14581659.31	40°08'59.6460"N	80°32'6.2926"W	1777.56	74.050	7.00	5.38	7.04
6852.00	44.440	157.620	6323.42	264.91	432.54	1734.86	1770358.41	14581603.41	40°08'59.0921"N	80°32'5.9650"W	1787.97	76.000	4.56	2.78	5.29
6898.00	49.380	157.670	6354.84	298.49	401.48	1747.63	1770371.17	14581572.36	40°08'58.7845"N	80°32'5.8026"W	1793.15	77.062	10.74	10.74	0.11
6943.00	55.040	157.590	6382.40	334.04	368.60	1761.16	1770384.70	14581539.50	40°08'58.4590"N	80°32'5.6306"W	1799.32	78.179	12.58	12.58	-0.18
6988.00	61.210	158.340	6406.15	372.23	333.20	1775.48	1770399.01	14581504.11	40°08'58.1083"N	80°32'5.4486"W	1806.48	79.371	13.78	13.71	1.67
7033.00	66.960	159.110	6425.81	412.68	295.49	1790.16	1770413.68	14581466.42	40°08'57.7350"N	80°32'5.2622"W	1814.38	80.627	12.87	12.78	1.71
7079.00	71.930	157.920	6441.96	455.73	255.43	1805.93	1770429.45	14581426.37	40°08'57.3383"N	80°32'5.0617"W	1823.91	81.950	11.07	10.80	-2.59
7124.00	76.160	157.670	6454.33	498.99	215.38	1822.28	1770445.79	14581386.34	40°08'56.9417"N	80°32'4.8539"W	1834.97	83.259	9.42	9.40	-0.56
7169.00	80.720	157.330	6463.34	543.06	174.66	1839.15	1770462.66	14581345.64	40°08'56.5384"N	80°32'4.6394"W	1847.43	84.575	10.16	10.13	-0.76
7215.00	82.590	156.250	6470.02	588.57	132.84	1857.09	1770480.59	14581303.83	40°08'56.1242"N	80°32'4.4112"W	1861.83	85.909	4.68	4.07	-2.35
7260.00	83.890	156.850	6475.31	633.25	91.84	1874.87	1770498.36	14581262.85	40°08'55.7181"N	80°32'4.1850"W	1877.12	87.196	3.18	2.89	1.33
7305.00	85.560	156.440	6479.45	678.05	50.70	1892.63	1770516.12	14581221.72	40°08'55.3107"N	80°32'3.9590"W	1893.31	88.465	3.82	3.71	-0.91
7351.00	87.380	156.760	6482.28	723.96	8.57	1910.87	1770534.34	14581179.61	40°08'54.8934"N	80°32'3.7271"W	1910.89	89.743	4.02	3.96	0.70
7396.00	89.660	155.650	6483.45	768.93	-32.59	1929.02	1770552.49	14581138.46	40°08'54.4857"N	80°32'3.4962"W	1929.29	90.968	5.63	5.07	-2.47
7487.00	90.180	156.590	6483.57	859.90	-115.80	1965.85	1770589.31	14581055.29	40°08'53.6616"N	80°32'3.0274"W	1969.26	93.371	1.18	0.57	1.03
7577.00	89.880	158.040	6483.53	949.90	-198.83	2000.56	1770624.01	14580972.28	40°08'52.8392"N	80°32'2.5860"W	2010.42	96.676	1.65	-0.33	1.61
7668.00	88.950	157.020	6484.45	1040.89	-282.92	2035.34	1770658.77	14580888.23	40°08'52.0065"N	80°32'2.1439"W	2054.91	97.914	1.52	-1.02	-1.12
7759.00	89.480	156.560	6485.70	1131.87	-366.54	2071.20	1770694.62	14580804.64	40°08'51.1782"N	80°32'1.6878"W	2103.38	100.036	0.77	0.58	-0.51
7849.00	90.220	157.590	6485.94	1221.87	-449.43	2106.26	1770729.66	14580721.78	40°08'50.3573"N	80°32'1.2419"W	2153.67	102.045	1.41	0.82	1.14
7940.00	89.110	158.280	6486.47	1312.86	-533.76	2140.44	1770763.83	14580637.48	40°08'49.5222"N	80°32'0.8074"W	2205.99	104.002	1.44	-1.22	0.76
8031.00	89.050	156.480	6487.93	1403.85	-617.75	2175.43	1770798.81	14580553.53	40°08'48.6904"N	80°32'0.3625"W	2261.44	105.853	1.98	-0.07	-1.98
8121.00	89.910	156.130	6488.75	1493.82	-700.16	2211.60	1770834.96	14580471.15	40°08'47.8742"N	80°31'59.9024"W	2319.78	107.567	1.03	0.96	-0.39
8212.00	89.380	155.830	6489.31	1584.81	-784.23	2246.39	1770869.74	14580387.11	40°08'47.0416"N	80°31'59.4600"W	2379.35	109.245	3.11	-0.58	3.05
8303.00	89.380	155.910	6490.30	1675.80	-868.21	2281.40	1770904.74	14580303.16	40°08'46.2099"N	80°31'59.0149"W	2441.02	110.835	3.38	0.00	-3.38
8393.00	90.120	156.910	6490.69	1765.78	-950.66	2317.47	1770940.79	14580220.74	40°08'45.3932"N	80°31'58.5560"W	2504.88	112.304	1.45	0.82	1.20
8484.00	89.600	158.400	6490.91	1856.77	-1034.83	2352.07	1770975.38	14580136.61	40°08'44.5597"N	80°31'58.1162"W	2569.65	113.748	1.73	-0.57	1.64
8575.00	88.680	152.330	6492.28	1947.66	-1117.50	2389.98	1771013.27	14580053.97	40°08'43.7408"N	80°31'57.6336"W	2638.33	115.060	6.75	-1.01	-6.67

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Baker Hughes

Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
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WELLPATH DATA (227 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(ft/100ft)	(°/100ft)	(°/100ft)
8665.00	158.100	6494.69	2037.52	-1199.14	2427.68	1771050.96	14579972.36	40°08'42.9321"N	80°31'57.1537"W	2707.69	116.287	6.43	-0.48	6.41	-2.86
8756.00	155.500	6495.69	2128.49	-1282.77	2463.52	1771086.79	14579888.77	40°08'42.1238"N	80°31'56.6979"W	2777.48	117.506	3.77	2.46	-2.86	-2.40
8847.00	157.680	6496.82	2219.46	-1366.26	2499.67	1771157.23	14579872.15	40°08'40.4531"N	80°31'55.8018"W	2919.24	119.770	2.64	-2.64	2.40	-0.22
8937.00	157.480	6497.96	2309.45	-1449.44	2533.99	1771189.97	14579637.30	40°08'39.6125"N	80°31'55.3857"W	2990.37	120.870	3.34	-1.19	3.12	-0.22
9028.00	160.320	6498.09	2400.41	-1534.33	2566.74	1771189.97	14579637.30	40°08'39.6125"N	80°31'55.3857"W	2990.37	120.870	3.34	-1.19	3.12	-0.22
9078.00	160.320	6498.09	2400.41	-1534.33	2566.74	1771189.97	14579637.30	40°08'39.6125"N	80°31'55.3857"W	2990.37	120.870	3.34	-1.19	3.12	-0.22
9119.00	156.420	6498.75	2491.38	-1618.90	2600.28	1771223.49	14579552.76	40°08'38.7750"N	80°31'54.9596"W	3063.05	121.906	4.31	-0.44	-4.29	-0.22
9209.00	157.720	6499.04	2581.37	-1701.79	2635.34	1771258.54	14579469.90	40°08'37.9541"N	80°31'54.5138"W	3137.06	122.853	1.45	0.08	1.44	-0.08
9300.00	158.210	6499.34	2672.37	-1786.14	2669.48	1771292.67	14579385.58	40°08'37.1188"N	80°31'54.0799"W	3211.92	123.786	0.54	-0.08	0.54	-0.08
9391.00	158.340	6499.71	2763.36	-1870.68	2703.17	1771326.34	14579301.08	40°08'36.2817"N	80°31'53.6519"W	3287.33	124.684	0.15	-0.03	0.14	-0.03
9481.00	158.390	6501.02	2853.34	-1954.33	2736.35	1771359.51	14579217.46	40°08'35.4533"N	80°31'53.2303"W	3362.59	125.535	1.30	-1.30	0.06	-1.30
9572.00	158.620	6500.97	2944.31	-2038.99	2769.69	1771392.83	14579132.83	40°08'34.6150"N	80°31'52.8068"W	3439.28	126.360	3.20	3.19	0.25	3.19
9663.00	158.550	6499.80	3035.29	-2123.70	2802.91	1771426.04	14579048.16	40°08'33.7761"N	80°31'52.3848"W	3516.59	127.150	1.63	-1.63	-0.08	-1.63
9753.00	158.000	6500.07	3125.28	-2207.30	2836.22	1771459.34	14578964.58	40°08'32.9482"N	80°31'51.9615"W	3593.93	127.892	0.72	-0.38	-0.61	-0.38
9844.00	157.340	6498.91	3216.26	-2291.47	2870.79	1771493.90	14578880.45	40°08'32.1147"N	80°31'51.0752"W	3673.18	128.597	2.45	2.34	-0.73	2.34
9934.00	156.690	6498.59	3306.25	-2374.31	2905.93	1771529.03	14578713.50	40°08'31.2942"N	80°31'51.0251"W	3752.57	129.251	3.60	-3.52	-0.72	-3.52
10025.00	158.690	6498.32	3397.23	-2458.48	2940.47	1771563.55	14578713.50	40°08'30.4606"N	80°31'50.6362"W	3832.82	129.899	4.05	3.41	2.20	3.41
10115.00	158.810	6497.11	3487.20	-2542.35	2973.08	1771596.16	14578629.66	40°08'29.6301"N	80°31'50.2220"W	3911.88	130.535	2.12	-2.11	0.13	-2.11
10206.00	158.270	6497.14	3578.18	-2627.04	3006.38	1771629.43	14578545.00	40°08'28.7915"N	80°31'49.7991"W	3992.45	131.148	0.70	0.36	-0.59	0.36
10296.00	158.910	6497.09	3668.16	-2710.84	3039.20	1771662.25	14578461.23	40°08'27.9617"N	80°31'49.3821"W	4072.52	131.732	0.80	-0.27	0.76	-0.27
10387.00	155.730	6496.80	3759.15	-2794.81	3074.25	1771697.29	14578377.30	40°08'27.1301"N	80°31'48.9365"W	4154.76	132.274	3.59	0.60	-3.54	0.60
10478.00	156.810	6496.43	3850.13	-2878.11	3110.87	1771733.89	14578294.03	40°08'26.3050"N	80°31'48.4706"W	4238.05	132.774	1.29	-0.51	1.19	-0.51
10568.00	159.880	6496.53	3940.11	-2961.75	3144.08	1771767.09	14578210.43	40°08'25.4768"N	80°31'48.0488"W	4319.40	133.290	3.41	-0.13	3.41	-0.13
10659.00	156.470	6496.50	4031.09	-3046.21	3177.91	1771800.90	14578125.99	40°08'24.6403"N	80°31'47.6190"W	4402.10	133.788	3.76	0.30	-3.75	0.30
10749.00	158.820	6496.07	4121.08	-3129.44	3212.14	1771835.12	14578042.80	40°08'23.8161"N	80°31'47.1839"W	4484.56	134.253	2.63	0.28	2.61	0.28
10840.00	155.240	6496.14	4212.06	-3213.21	3247.64	1771870.61	14577959.06	40°08'22.9864"N	80°31'46.7325"W	4568.58	134.695	4.05	-0.98	-3.93	-0.98
10931.00	159.500	6496.90	4303.04	-3297.19	3282.65	1771905.60	14577875.12	40°08'22.1548"N	80°31'46.2875"W	4652.66	135.127	4.68	0.03	4.68	0.03
11021.00	158.600	6497.57	4393.00	-3381.23	3314.83	1771937.77	14577791.10	40°08'21.3225"N	80°31'45.8789"W	4735.06	135.568	1.00	0.07	-1.00	0.07
11112.00	158.590	6499.25	4483.96	-3465.94	3348.03	1771970.96	14577706.43	40°08'20.4837"N	80°31'45.4571"W	4818.93	135.991	1.45	-1.45	-0.01	-1.45
11202.00	158.710	6499.57	4573.93	-3549.75	3380.79	1772003.71	14577622.65	40°08'19.6538"N	80°31'45.0410"W	4902.09	136.397	3.38	3.38	0.13	3.38
11293.00	153.000	6498.74	4664.85	-3632.75	3418.00	1772040.90	14577539.68	40°08'18.8316"N	80°31'44.5676"W	4987.95	136.745	6.52	-1.76	-6.27	-1.76

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WELLPATH DATA (227 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
11384.00	87.690	157.590	6500.80	4755.73	-3715.37	3456.01	1772078.90	14577457.09	40°08'18.0132"N	80°31'44.0838"W	5074.25	137.071	5.51	-2.23	5.04
11474.00	89.050	156.420	6503.36	4845.69	-3798.18	3491.16	1772114.03	14577290.76	40°08'17.1930"N	80°31'43.6370"W	5158.91	137.412	1.99	-1.51	-1.30
11565.00	88.860	157.050	6505.02	4936.67	-3881.77	3527.09	1772149.95	14577207.03	40°08'16.3651"N	80°31'43.1800"W	5244.86	137.741	0.72	-0.21	0.69
11656.00	90.560	156.950	6505.49	5027.66	-3965.53	3562.65	1772185.49	14577207.03	40°08'15.5355"N	80°31'42.7279"W	5330.84	138.063	1.86	-1.86	-0.11
11746.00	90.680	156.740	6504.52	5117.65	-4048.28	3598.04	1772220.87	14577124.31	40°08'14.7160"N	80°31'42.2780"W	5416.13	138.370	0.27	0.14	-0.23
11837.00	89.320	158.090	6504.52	5208.64	-4132.30	3632.98	1772255.80	14577040.33	40°08'13.8839"N	80°31'41.8338"W	5502.22	138.679	2.11	-1.49	1.48
11928.00	90.030	156.670	6505.04	5299.64	-4216.29	3667.98	1772290.79	14576956.36	40°08'13.0520"N	80°31'41.3889"W	5588.49	138.978	1.74	0.78	-1.56
12018.00	89.690	155.960	6505.26	5389.62	-4298.71	3704.13	1772326.92	14576873.98	40°08'12.2357"N	80°31'40.9290"W	5674.46	139.249	0.87	-0.38	-0.79
12109.00	90.950	156.270	6504.75	5480.59	-4381.91	3740.98	1772363.76	14576790.81	40°08'11.4115"N	80°31'40.4603"W	5761.60	139.512	1.43	1.38	0.34
12200.00	90.430	158.640	6503.65	5571.58	-4465.95	3775.86	1772398.63	14576706.80	40°08'10.5793"N	80°31'40.0169"W	5848.23	139.786	2.67	-0.57	2.60
12290.00	92.550	155.240	6501.31	5661.53	-4548.71	3811.10	1772433.85	14576624.07	40°08'9.7596"N	80°31'39.5690"W	5934.24	140.042	4.45	2.36	-3.78
12381.00	90.400	151.060	6498.97	5752.21	-4629.85	3852.17	1772474.91	14576542.96	40°08'8.9556"N	80°31'39.0457"W	6022.85	140.239	5.16	-2.36	-4.59
12472.00	89.540	157.800	6499.02	5843.03	-4711.89	3891.43	1772514.15	14576460.96	40°08'8.1428"N	80°31'38.5459"W	6111.06	140.448	7.47	-0.95	7.41
12563.00	92.180	156.190	6497.65	5934.00	-4795.63	3926.98	1772549.69	14576377.25	40°08'7.3134"N	80°31'38.0939"W	6198.33	140.687	3.40	2.90	-1.77
12653.00	90.090	158.340	6495.87	6023.97	-4878.61	3961.75	1772584.44	14576294.30	40°08'6.4916"N	80°31'37.6519"W	6284.61	140.921	3.33	-2.32	2.39
12744.00	91.290	155.960	6494.77	6114.96	-4962.46	3997.08	1772619.76	14576210.48	40°08'5.6612"N	80°31'37.2027"W	6372.02	141.150	2.93	1.32	-2.62
12834.00	88.310	158.350	6495.09	6204.94	-5045.38	4032.02	1772654.68	14576127.59	40°08'4.8399"N	80°31'36.7586"W	6458.57	141.370	4.24	-3.31	2.66
12925.00	90.520	161.890	6496.02	6295.82	-5130.94	4062.95	1772685.61	14576042.07	40°08'3.9928"N	80°31'36.3662"W	6544.78	141.626	4.59	2.43	3.89
13016.00	90.980	156.830	6494.82	6386.73	-5216.06	4095.02	1772717.66	14575956.98	40°08'3.1499"N	80°31'35.9592"W	6631.48	141.865	5.58	0.51	-5.56
13106.00	89.570	159.970	6494.39	6476.71	-5299.73	4128.14	1772750.77	14575873.34	40°08'2.3214"N	80°31'35.5385"W	6717.79	142.084	3.82	-1.57	3.49
13197.00	91.570	158.090	6493.49	6567.66	-5384.69	4160.71	1772783.32	14575788.42	40°08'1.4801"N	80°31'35.1251"W	6804.88	142.307	3.02	2.20	-2.07
13288.00	88.340	158.720	6493.56	6658.63	-5469.29	4194.19	1772816.80	14575703.85	40°08'0.6423"N	80°31'34.6998"W	6892.34	142.517	3.62	-3.55	0.69
13378.00	90.550	160.920	6494.43	6748.54	-5553.75	4225.24	1772847.83	14575619.42	40°07'59.8060"N	80°31'34.3059"W	6978.31	142.737	3.46	2.46	-5.97
13469.00	89.970	155.490	6494.02	6839.50	-5638.21	4259.01	1772881.59	14575534.99	40°07'58.9696"N	80°31'33.8769"W	7066.02	142.933	6.00	-0.64	-2.49
13560.00	87.780	157.730	6495.78	6929.46	-5720.79	4294.73	1772917.29	14575452.44	40°07'58.1517"N	80°31'33.4227"W	7153.47	143.104	3.48	-2.43	2.49
13650.00	89.660	162.120	6497.82	7020.33	-5806.22	4325.95	1772948.50	14575367.05	40°07'57.3059"N	80°31'33.0267"W	7240.58	143.312	5.25	2.07	4.82
13741.00	93.020	159.110	6495.69	7111.15	-5892.01	4356.13	1772978.67	14575281.29	40°07'56.4565"N	80°31'32.6439"W	7327.46	143.523	4.96	3.69	-3.31
13832.00	91.290	155.730	6492.27	7202.06	-5975.96	4391.04	1773013.57	14575197.37	40°07'55.6250"N	80°31'32.2002"W	7415.75	143.692	4.17	-1.90	-3.71
13922.00	90.280	158.570	6491.03	7292.04	-6058.88	4425.98	1773048.50	14575114.48	40°07'54.8038"N	80°31'31.7561"W	7503.29	143.852	3.35	-1.12	3.16
14013.00	89.880	157.840	6490.91	7383.04	-6143.40	4459.70	1773082.20	14575029.99	40°07'53.9668"N	80°31'31.3279"W	7591.46	144.023	0.82	-0.44	-0.69

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Actual Wellpath Report

Gary Kestner OHI 410H AWP Proj: 18232



Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
Facility	Gary Kestner OHI Pad
Slot	Slot #410
	Gary Kestner OHI 410H AWP
	Well
	AP/Illegal

WELLPATH DATA (227 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
14103.00	89.850	6491.12	7473.03	-6227.03	4492.97	1773115.46	14574946.40	40°07'53.1386"N	80°31'30.9053"W	7678.71	144.189	0.81	-0.03	0.81	0.81
14194.00	90.490	6490.85	7564.01	-6311.67	4526.38	1773148.85	14574861.79	40°07'52.3004"N	80°31'30.4810"W	7766.94	144.354	0.84	0.70	-0.46	0.70
14285.00	90.430	6490.12	7655.00	-6396.15	4660.20	1773182.66	14574777.34	40°07'51.4638"N	80°31'30.0513"W	7855.33	144.513	0.17	-0.07	-0.15	0.49
14376.00	90.060	6489.73	7745.99	-6480.72	4593.80	1773216.25	14574692.80	40°07'50.6263"N	80°31'29.6247"W	7943.72	144.669	0.64	-0.41	0.49	0.49
14466.00	90.550	6489.25	7835.98	-6564.38	4626.96	1773249.40	14574609.17	40°07'49.7978"N	80°31'29.2034"W	8031.18	144.822	0.68	0.54	-0.41	0.54
14557.00	90.060	6488.77	7926.95	-6649.20	4659.93	1773282.35	14574524.39	40°07'48.9579"N	80°31'28.7849"W	8119.53	144.976	1.36	-0.54	1.25	-0.41
14648.00	88.770	6489.69	8017.93	-6733.60	4693.92	1773316.33	14574440.02	40°07'48.1221"N	80°31'28.3531"W	8208.18	145.120	3.12	-1.42	-2.78	-1.42
14739.00	90.490	6490.28	8108.93	-6817.64	4728.81	1773351.21	14574356.02	40°07'47.2898"N	80°31'27.9097"W	8297.10	145.254	2.37	1.89	1.43	1.89
14829.00	89.780	6490.07	8198.92	-6900.59	4763.71	1773386.10	14574273.10	40°07'46.4683"N	80°31'27.4660"W	8385.17	145.381	2.19	-0.79	-2.04	-0.79
14920.00	89.660	6490.51	8289.89	-6983.80	4800.53	1773422.90	14574189.91	40°07'45.6440"N	80°31'26.9978"W	8474.59	145.496	0.30	-0.13	-0.27	-0.13
15010.00	90.150	6490.66	8379.85	-7065.88	4837.45	1773459.81	14574107.87	40°07'44.8309"N	80°31'26.5282"W	8563.16	145.604	0.75	0.54	-0.51	0.54
15101.00	89.510	6490.93	8470.81	-7148.83	4874.89	1773497.23	14574024.95	40°07'44.0093"N	80°31'26.0520"W	8652.76	145.709	0.79	-0.70	0.35	-0.70
15192.00	88.490	6492.52	8561.77	-7232.01	4911.75	1773534.08	14573941.80	40°07'43.1853"N	80°31'25.5832"W	8742.27	145.817	1.23	-1.12	0.51	-1.12
15282.00	88.150	6495.16	8651.70	-7314.20	4948.32	1773570.64	14573859.64	40°07'42.3712"N	80°31'25.1180"W	8830.82	145.920	0.80	-0.38	-0.71	-0.38
15373.00	89.570	6496.97	8742.66	-7397.74	4984.35	1773606.65	14573776.14	40°07'41.5438"N	80°31'24.6599"W	8920.22	146.029	2.66	1.56	2.15	1.56
15464.00	88.980	6498.12	8833.65	-7481.44	5020.02	1773642.31	14573692.46	40°07'40.7147"N	80°31'24.2065"W	9009.58	146.139	1.73	-0.65	-1.60	-0.65
15555.00	89.320	6499.47	8924.62	-7564.77	5056.57	1773678.84	14573609.17	40°07'39.8894"N	80°31'23.7417"W	9099.16	146.240	0.46	0.37	0.27	0.37
15645.00	89.230	6500.61	9014.59	-7647.12	5092.86	1773715.12	14573526.85	40°07'39.0736"N	80°31'23.2803"W	9187.80	146.337	0.50	-0.10	-0.49	-0.10
15736.00	90.890	6500.52	9105.58	-7730.68	5128.89	1773751.13	14573443.32	40°07'38.2460"N	80°31'22.8222"W	9277.33	146.438	2.35	1.82	1.48	1.82
15826.00	88.740	6500.81	9195.57	-7813.48	5164.15	1773786.38	14573360.56	40°07'37.4259"N	80°31'22.3741"W	9365.83	146.538	2.56	-2.39	-0.92	-2.39
15917.00	90.770	6501.20	9286.56	-7897.32	5199.51	1773821.73	14573276.75	40°07'36.5955"N	80°31'21.9246"W	9455.29	146.640	2.60	2.23	1.34	2.23
16008.00	89.230	6501.20	9377.51	-7980.40	5236.58	1773858.78	14573193.69	40°07'35.7725"N	80°31'21.4531"W	9545.08	146.728	4.27	-1.69	-3.92	-1.69
16098.00	90.030	6501.78	9467.39	-8061.71	5275.16	1773897.35	14573112.42	40°07'34.9670"N	80°31'20.9621"W	9634.24	146.801	1.33	0.89	0.99	0.89
16189.00	89.750	6501.91	9558.37	-8145.28	5311.14	1773933.32	14573028.88	40°07'34.1392"N	80°31'20.5046"W	9723.88	146.894	3.63	-0.31	3.62	-0.31
16280.00	90.550	6501.71	9649.35	-8229.99	5344.40	1773966.56	14572944.21	40°07'33.3004"N	80°31'20.0824"W	9813.02	147.001	1.00	0.88	0.47	0.88
16370.00	90.150	6501.16	9739.33	-8313.81	5377.17	1773999.99	14572860.42	40°07'32.4704"N	80°31'19.6663"W	9901.18	147.106	0.54	-0.44	-0.30	-0.44
16461.00	89.600	6501.36	9830.33	-8398.10	5411.44	1774033.58	14572776.16	40°07'31.6356"N	80°31'19.2310"W	9990.59	147.204	1.52	-1.40	1.58	1.52
16552.00	90.520	6501.27	9921.32	-8482.45	5445.59	1774067.71	14572691.84	40°07'30.8002"N	80°31'18.7972"W	10080.00	147.300	1.88	1.01	1.58	1.88
16642.00	89.780	6501.03	10011.30	-8566.29	5478.31	1774100.42	14572608.03	40°07'29.9700"N	80°31'18.3818"W	10168.25	147.400	0.82	-0.82	0.00	-0.82
16733.00	90.090	6501.13	10102.27	-8651.16	5511.14	1774133.24	14572523.19	40°07'29.1295"N	80°31'17.9651"W	10257.45	147.501	0.51	0.34	0.38	0.34

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Actual Wellpath Report

Gary Kestner OHI 410H AWP Proj: 18232

Baker Hughes

Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
Facility	Gary Kestner OHI Pad
Wellbore	Gary Kestner OHI 410H AWB
AP/ Legal	
Well	Gary Kestner OHI 410H
Slot #	Slot #410

WELLPATH DATA (227 stations) † = interpolated, ‡ = extrapolated station															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)
16824.00	89.780	158.710	6501.24	10193.25	-8736.04	5543.94	1774166.03	14572438.34	40°07'28.2890"N	80°31'17.5487"W	10346.68	147.601	0.49	-0.34	-0.35
17005.00	90.180	157.690	6501.27	10374.23	-8904.13	5611.08	1774233.14	14572270.32	40°07'26.6244"N	80°31'16.6962"W	10435.07	147.782	0.66	0.20	-0.50
17096.00	90.090	158.790	6501.05	10465.22	-8988.64	5644.81	1774266.86	14572185.84	40°07'25.7874"N	80°31'16.2678"W	10614.12	147.871	1.21	-0.10	1.21
17186.00	89.750	158.190	6501.18	10555.20	-9072.38	5677.81	1774299.84	14572102.14	40°07'24.9583"N	80°31'15.8488"W	10702.59	147.960	0.77	-0.38	-0.67
17277.00	89.630	159.650	6501.67	10646.17	-9157.28	5710.54	1774332.56	14572017.27	40°07'24.1175"N	80°31'15.4334"W	10791.94	148.052	1.61	-0.13	1.60
17367.00	89.510	156.490	6502.35	10736.15	-9240.76	5744.15	1774366.15	14571933.82	40°07'23.2908"N	80°31'15.0066"W	10880.57	148.135	3.51	-0.13	-3.51
17458.00	90.310	161.100	6502.49	10827.10	-9325.57	5777.05	1774399.05	14571849.04	40°07'22.4509"N	80°31'14.5889"W	10969.99	148.222	5.14	0.88	5.07
17549.00	89.630	157.780	6502.54	10918.04	-9410.76	5809.01	1774430.99	14571763.88	40°07'21.6073"N	80°31'14.1835"W	11059.25	148.314	3.72	-0.75	-3.65
17639.00	89.970	158.030	6502.85	11008.03	-9494.15	5842.86	1774464.83	14571680.53	40°07'20.7815"N	80°31'13.7535"W	11148.00	148.391	0.47	0.38	0.28
17730.00	89.910	158.390	6502.95	11099.03	-9578.65	5876.64	1774498.60	14571596.06	40°07'19.9447"N	80°31'13.3245"W	11237.68	148.470	0.40	-0.07	0.40
17821.00	89.880	158.670	6503.11	11190.01	-9663.34	5909.94	1774531.89	14571511.41	40°07'19.1060"N	80°31'12.9017"W	11327.29	148.551	0.31	-0.03	0.31
17911.00	89.480	158.170	6503.62	11280.00	-9747.03	5943.05	1774564.98	14571427.75	40°07'18.2773"N	80°31'12.4814"W	11415.97	148.628	0.71	-0.44	-0.56
18002.00	89.880	157.810	6504.13	11370.99	-9831.39	5977.15	1774599.07	14571343.42	40°07'17.4417"N	80°31'12.0482"W	11505.76	148.702	0.59	0.44	-0.40
18092.00	90.340	157.110	6503.95	11460.99	-9914.52	6011.65	1774633.55	14571260.32	40°07'16.6185"N	80°31'11.6099"W	11594.72	148.770	0.93	0.51	-0.78
18183.00	90.280	157.020	6503.46	11551.99	-9998.32	6047.11	1774669.00	14571176.55	40°07'15.7884"N	80°31'11.1593"W	11684.77	148.834	0.12	-0.07	-0.10
18232.00	90.280	157.020	6503.22	11600.98	-10043.43	6066.24	1774688.12	14571131.46	40°07'15.3416"N	80°31'10.9162"W	11733.28	148.868	0.00	0.00	0.00

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Actual Wellpath Report

Gary Kestner OHI 410H AWP Proj: 18232



Operator	SWN PRODUCTION COMPANY, LLC
Field	Ohio
Facility	Gary Kestner OHI Pad
Slot	Slot #410
	Well
	Gary Kestner OHI 410H
	API/Legal
	Wellbore
	Gary Kestner OHI 410H AWB

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	-0.02	0.27
17.5in Open Hole	100.00	755.00	655.00	100.00	754.91	-0.02	0.27	-5.57	7.59
13.375in Casing Surface	26.00	678.00	652.00	26.00	677.93	0.00	0.00	-4.02	6.74
12.25in Open Hole	755.00	2070.00	1315.00	754.91	2067.42	-5.57	7.59	52.87	27.38
9.625in Casing Intermediate	26.00	2047.00	2021.00	26.00	2044.42	0.00	0.00	53.02	27.25
8.75in Open Hole	2047.00	5855.00	3808.00	2044.42	5495.32	53.02	27.25	595.86	1302.86
8.5in Open Hole	5855.00	18232.00	12377.00	5495.32	6503.22	595.86	1302.86	-10043.43	6066.24
5.5in Casing Production	26.00	18232.00	18206.00	26.00	6503.22	0.00	0.00	-10043.43	6066.24

Ref Wellpath: Gary Kestner OHI 410H AWP Proj: 18232

Name	TVD [ft]	North [ft]	East [ft]	Grid East [us ft]	Grid North [us ft]	Latitude	Longitude	Shape
Gary Kestner OHI 410H LP Rev-4	6486.00	45.84	1896.87	1770520.35	14581216.86	40°08'55.2624"N	80°32'3.9048"W	point
Gary Kestner OHI 410H BHL Rev-4	6676.50	-10039.80	6078.67	1774700.55	14571135.09	40°07'15.3769"N	80°31'10.7559"W	point
Gary Kestner SE Unit	6999.20	-7366.81	3276.50	1771899.46	14573807.05	40°07'41.9392"N	80°31'46.6439"W	polygon
Gary Kestner SW Unit	6999.20	-7366.81	3276.50	1771899.46	14573807.05	40°07'41.9392"N	80°31'46.6439"W	polygon

2D Polygon: dimensions not calculated

2D Polygon: dimensions not calculated

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Actual Wellpath Report
 Gary Kestner OHI 410H AWP Proj: 18232
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Baker Hughes

Operator	SWN PRODUCTION COMPANY, LLC	Well	Gary Kestner OHI 410H
Field	Ohio	API/Legal	
Facility	Gary Kestner OHI Pad	Wellbore	Gary Kestner OHI 410H AWB
Slot	Slot #410		

WELLPATH COMPOSITION - Ref Wellbore: Gary Kestner OHI 410H AWB Ref Wellpath: Gary Kestner OHI 410H AWP Proj: 18232			
Start MD	End MD	Positional Uncertainty Model	Log Name/Comment
(ft)	(ft)		Wellbore
26.00	660.00	SDI Keeper v1.04	01 Scientific Drilling Gyro <17 1/2"> (100'-660')
660.00	2000.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12-1/4"> (660')(788'-2000')
660.00	2000.00	OWSG MWD rev2 + HRGM	03 Premier MWD Surveys <8-3/4"> (2000')(2073'-5789')
2000.00	5789.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8-1/2"> (5789')(5856'-18183')
5789.00	18232.00		Gary Kestner OHI 410H AWB
			1/26/2020

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Wellpath general comments
 API: 47-069-00306-0000
 BH Job #: 110199699A
 Rig: SDC 41
 Duration: 01/26/2020 - 01/30/2020

COMMENTS

Operator	SWN PRODUCTION COMPANY, LLC	Well	Gary Kestner OHI 410H
Field	Ohio	API/Legal	
Facility	Gary Kestner OHI Pad	Wellbore	Gary Kestner OHI 410H AWB
Slot	Slot #410		

Actual Wellpath Report
 Gary Kestner OHI 410H AWP Proj: 18232



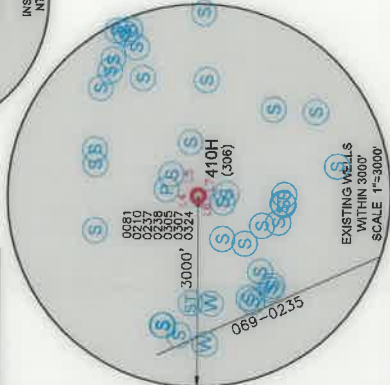
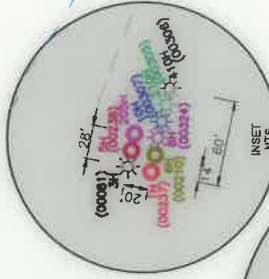
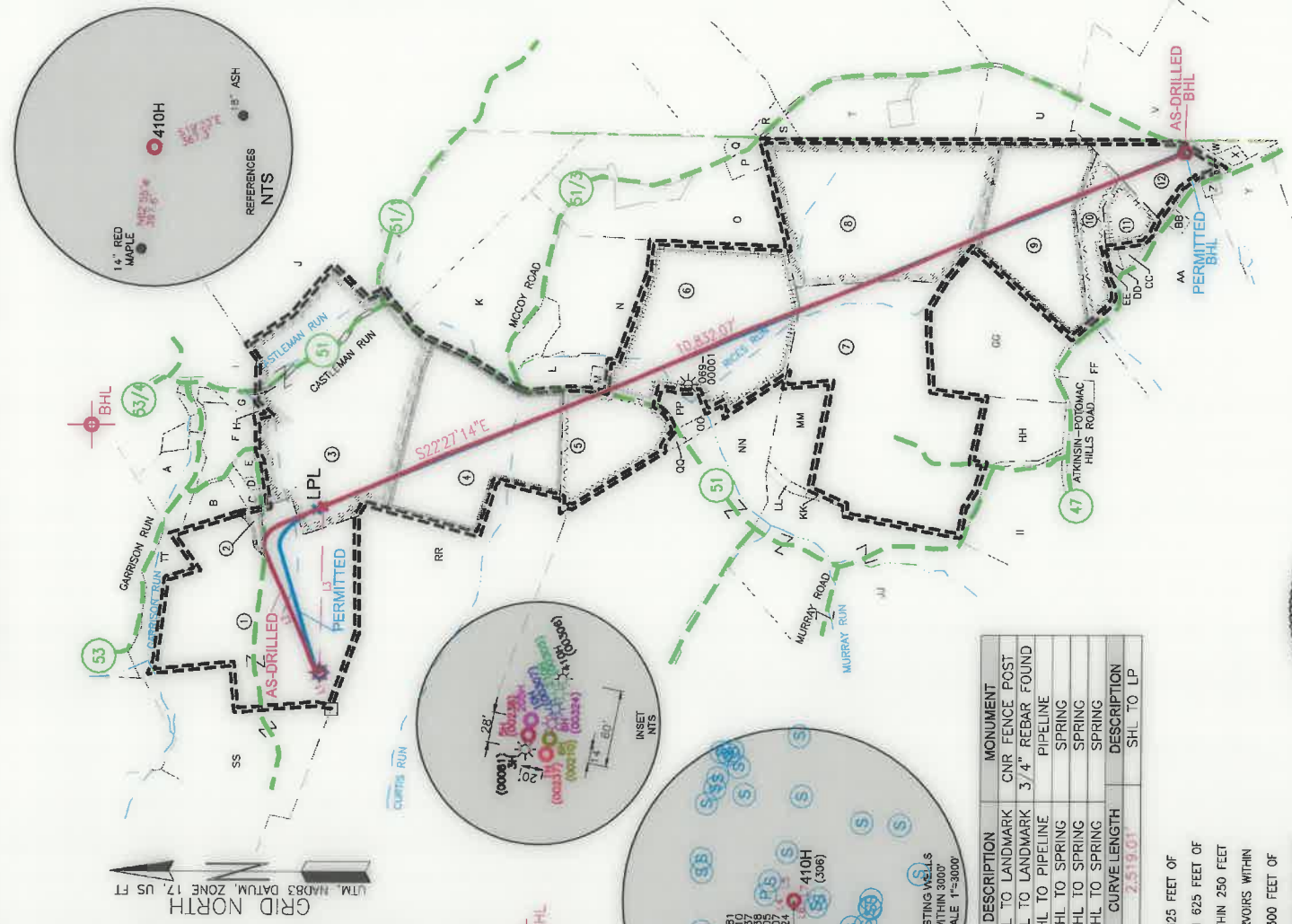
Latitude: 40°10'00"
JACKSON SURVEYING
 INC.

2413 EAST PIKE ST.
 SUITE 112
 Clarksburg, WV 26301
 304-623-5851

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,444,349.821 EASTING: 539,077.737
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,439,867 EASTING: 539,665.731
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,441,288.574 EASTING: 540,926.758
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,445,349.901 EASTING: 539,077.317
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,444,363.748 EASTING: 539,655.700
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,441,290.656 EASTING: 540,929.809

Latitude: 40°07'30" Longitude: 80°30'00"
 SURFACE HOLE 11,517' BOTTOM HOLE 1,487'

Latitude: 40°07'30" Longitude: 80°30'00"
 SURFACE HOLE 6,587' BOTTOM HOLE 1,487'



LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	S 72°08'18" W	454.18'	SHL TO LANDMARK	CNR FENCE POST
L2	N 63°52'43" E	1,924.84'	SHL TO LANDMARK	3/4" REBAR FOUND
L4	N 10°58'16" E	3.56 45'	SHL TO PIPELINE	PIPELINE
L5	N 16°46'58" E	560.86'	SHL TO SPRING	SPRING
L6	S 16°10'56" W	372.00'	SHL TO SPRING	SPRING
L7	S 04°38'39" E	420.44'	SHL TO SPRING	SPRING
L3	S 89°01'56" E	1,929.39'	DISTANCE	CURVE LENGTH
				2,519.01'
				SHL TO LPL

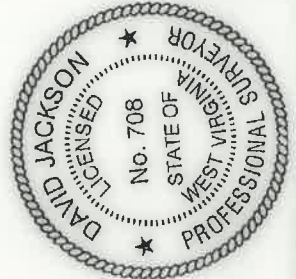
- WELL RESTRICTIONS**
- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
 - NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 300 FEET OF PROPOSED WELL.
 - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
 - NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

- 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 PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INSERTS ARE GRID NORTH UNLESS OTHERWISE SPECIFIED.

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. 708
David L Jackson



(+) 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 SURVEY
 ELEVATION: (NAVD 88, US FT)

OPERATOR'S WELL #: 410H
 API WELL #: 47
 STATE: WV COUNTY: PERMIT

LIQUID INJECTION STORAGE SHALLOW
 ELEVATION: 1291.4'
 QUADRANGLE: BETHANY, WV
 ACREAGE: ±95.981
 ACREAGE: ±95.981

COMPANY: **SWN** Production Company, LLC Production Company™
 GARY KESTNER OHI
 GARY KESTNER OHI
 410H

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS
 WATERSHED: CASTLEMAN RUN OF BUFFALO CREEK (HUC-10)
 DISTRICT: LIBERTY
 COUNTY: OHIO
 SURFACE OWNER: GARY KESTNER & TERRY KESTNER
 OIL & GAS ROYALTY OWNER: GARY KESTNER & TERRY KESTNER

FRAC TURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY AS DRILLED)

ESTIMATED DEPTH: 6,504 TVD 18,232 TMD
 DESIGNATED AGENT: BRITTANY WOODY
 ADDRESS: 1300 FORT PIERPONT RD. SUITE 200
 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

PERMIT
 ESTIMATED DEPTH: 6,504 TVD 18,232 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
 ADDRESS: 1300 FORT PIERPONT RD. SUITE 200
 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

DESIGNED AGENT: BRITTANY WOODY
 ADDRESS: 1300 FORT PIERPONT RD. SUITE 200
 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

DATE: 06-02-2020
 DRAWN BY: N. MANO
 SCALE: 1" = 2000'

DATE: 06-02-2020
 DRAWN BY: N. MANO
 SCALE: 1" = 2000'
 WELL LOCATION PLAT

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

**JACKSON SURVEYING
INC.**

2413 EAST PIKE ST.

SUITE 112

Clarksburg, WV 26301

304-623-5851

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	GARY KESTNER & TERRY KESTNER (S/R)	03-15-09
TRACT	SURFACE OWNER	TAX PARCEL
2	RICHARD C. COWEN SR. & C.A. WILLIAMS (S)	03-16-21
3	GREGORY N. MORMANIS & SHARON LEE MORMANIS (S)	03-16-13
4	WILLIAM I. RODGERS (LIFE ESTATE); LEWIS I. RODGERS (REMAINDERMAN) (S)	03-16-15
5	JEFFREY J. EISENHAUER (S)	03-16-18
6	DELMER K. LOEW & VIRGINIA G. LOEW (S)	03-16-18.2
7	RODNEY G. PLANTS & JESSICA J. PLANTS (S)	03-19-02
8	DAVID J. HALL & CYNTHIA J. HALL (S)	03-19-03
9	JOHN A. SCHULTZ (S)	03-19-6.10
10	ROBERT L. COOK & FLORENCE A. COOK (S)	03-19-06
11	NANCY C. BALL (S)	03-19-6.11
12	LEWIS E. NICHOLSON & SUSAN L. NICHOLSON (S)	03-19-17

ADJOINING OWNERS TABLE

TRACT	SURFACE OWNER	TAX PARCEL
A	GREGORY D. ATKINSON, ET AL	03-16-10.2
B	VANESSA M. HICKS & BRAYDEN J. HICKS	03-16-9.1
C	PATRICK J. MONTGOMERY & BRENDA LEE MONTGOMERY	03-16-11.1
D	RONALD LEE CONNER	03-16-11
E	RICHARD M. KELLY & JEANETTE L. KELLY	03-16-12
F	ROBERT L. GEAR & TAMMY Y. GEAR	03-16-09
G	JOYCE ANN STRAUSS	03-16-08
H	JOYCE A. ELLIS	03-16-13.1
I	TIMOTHY ALAN RYAN	03-16-04
J	DEBRA R. RIGGLE & ROY RIGGLE	03-16-14
K	WILLIAM RODGERS (LIFE)	03-16-16
L	WILLIAM I. RODGERS (LIFE)	03-16-17.3
M	TUNNEL RIDGE, LLC.	03-16-17.1
N	WILLIAM I. RODGERS	03-16-17
O	MICHAEL WILHELM & JULIA E. WILHELM	03-16-20
P	SCOTT A. WILHELM	03-16-20.7
Q	DUSTIN W. HUTSON	03-19-19
R	ELEANORE J. STEFANCIC LIVING TR.	230-015-00-00-0006-02
S	TUNNEL RIDGE, LLC.	230-015-00-00-0006-01
T	TUNNEL RIDGE, LLC.	230-015-00-00-0007-00
U	DANIEL E. CUMMINS & CHERYL L. CUMMINS	230-015-00-00-0018-00
V	WILLIAM R. WURTZBACHER & JEAN W. WURTZBACHER	230-008-00-00-0001-00
W	WILLIAM R. WURTZBACHER & JEAN W. WURTZBACHER	03-19-17
X	KEVIN R. WURTZBACHER & J.A. WURTZBACHER	03-19-17.3
Y	CARL E. MILLER JR.	03-19-15
Z	CARL E. MILLER JR. & CARL E. MILLER III	03-19-15.2
AA	CARL E. MILLER JR. & CARL E. MILLER III	03-19-15.4
BB	MARTHA E.M. SHALER	03-19-15.1
CC	NANCY C. BALL	03-19-16
DD	NANCY C. BALL	03-19-6.4
EE	NANCY C. BALL	03-19-6.12
FF	DANIEL LEE HENRY & DIANE L. HENRY	03-19-6.5
GG	MARK S. MIKESINOVICH	03-19-6.9
HH	DAVID E. MCNABB & B.L. MCNABB	03-19-6.8
II	MICHAEL H. FISHER & SUSAN K. FISHER	03-19-6.6
JJ	ROBERT J. REASS & N.C. REASS	03-19-01
KK	RODNEY G. PLANTS & JESSICA J. PLANTS	03-19-2.3
LL	RODNEY G. PLANTS & JESSICA J. PLANTS	03-19-2.2
MM	RODNEY G. PLANTS & JESSICA J. PLANTS	03-19-2.1
NN	DELMER K. LOEW & V.G. LOEW	03-16-19
OO	TUNNEL RIDGE, LLC.	03-16-18.3
PP	DELMER K. LOEW JR. & STEPHANIE L. LOEW	03-16-18.4
QQ	DELMER K. LOEW & VIRGINIA A. LOEW	03-16-18.1
RR	HELEN TOMINACK & JOHN I. TOMINACK JR.	03-15-10
SS	JOSEPH E. ENNIS & MARJORIE G. ENNIS	03-15-08
TT	GREGORY D. ATKINSON, ET AL	03-16-10.1

REVISIONS:

COMPANY:



OPERATOR'S

GARY KESTNER OHI

WELL #:

410H

DISTRICT:

LIBERTY

COUNTY:
OHIO

API # 47-069-00306

DATE: 06-02-2020

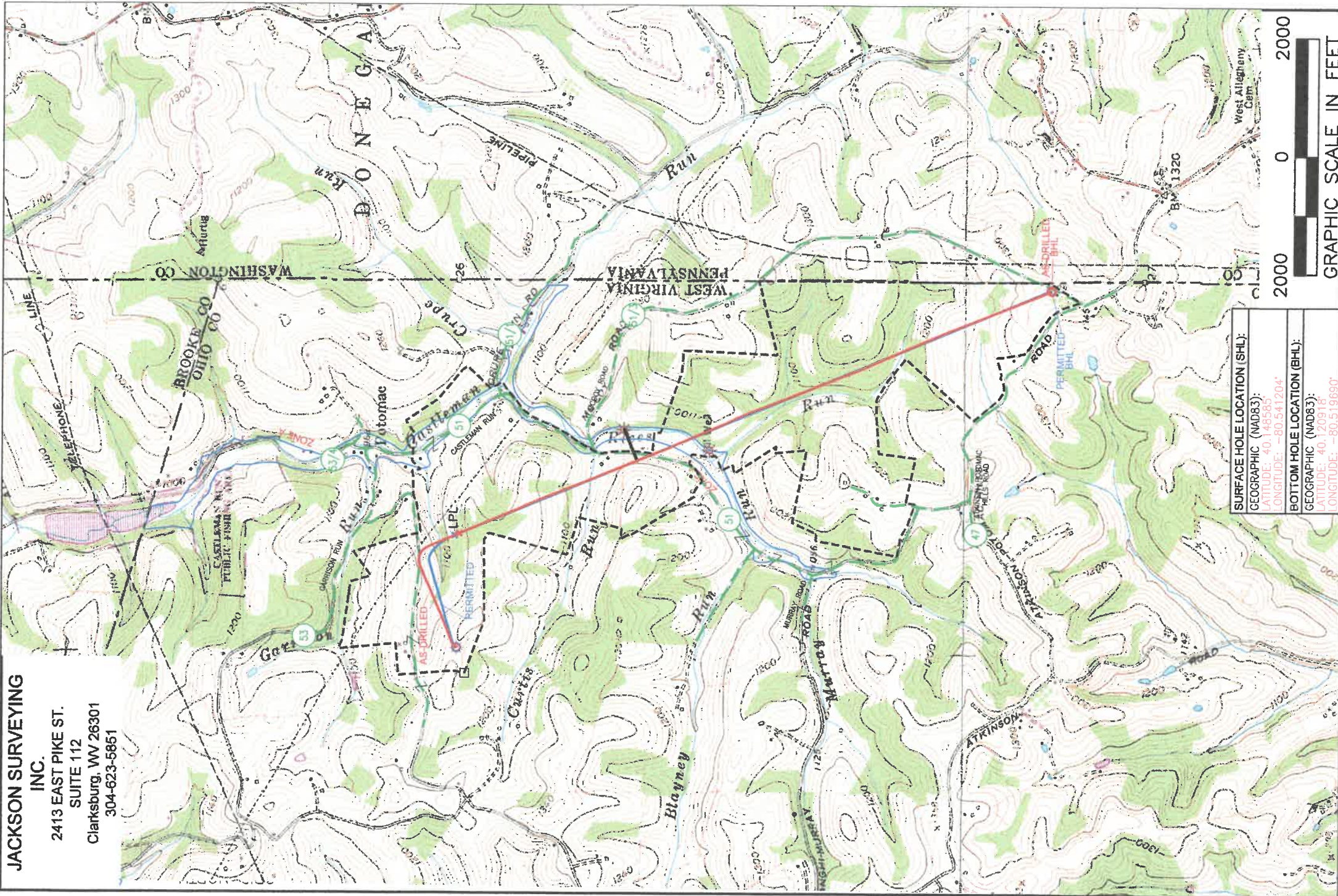
DRAWN BY: N. MANO

SCALE: N/A

DRAWING NO:

WELL LOCATION PLAT 2

**JACKSON SURVEYING
INC.**
2413 EAST PIKE ST.
SUITE 112
Clarksburg, WV 26301
304-623-5851



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.146566
LONGITUDE: -80.541204

BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.120918
LONGITUDE: -80.519690



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.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ✱ EXISTING / PRODUCING WELLHEAD
- LPL* LANDING POINT LOCATION
- Ⓢ EXISTING WATER WELL
- Ⓣ EXISTING SPRING
- SURVEYED BOUNDARY
- DRILLING UNIT
- LEASE BOUNDARY
- AS-DRILLED PATH
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: GARY KESTNER OHI	WELL # 410H	SERIAL # 410H
ADDRESS: 1300 FORT PIERPONT RD., SUITE 200 MORGANTOWN, WV 26508	COUNTY OHIO	CODE - 069	DISTRICT: LIBERTY
SURFACE OWNER: GARY KESTNER & TERRY KESTNER	USGS 7 1/2 QUADRANGLE MAP NAME BETHANY, WV		
API # 47-069-00306		PROPERTY NUMBER 2501163956	

Z:\2020 BACKUPS\1-02-20 DJ\SWN\GARY KESTNER OHI\WELL PLAT\410H\FINAL\410H 06-02-20\GARY KESTNER 410H OHI WELL PLAT 06-02-20.DWG

TUESDAY JUNE 02 2020 08:07AM

PAD ID 3001159487