

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

API 47 - 103 - 03194 County WETZEL District PROCTOR
Quad WILEYVILLE Pad Name MARGARET SUE KELLEY PAD1 Field/Pool Name VICTORY
Farm name MARGARET SUE KELLEY Well Number MARGARET SUE KELLEY WTZ 1H
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 4,393,243.11 Easting 525,887.03
Landing Point of Curve Northing 4,393,169.88 Easting 525,588.97
Bottom Hole Northing 4,394,739.78 Easting 523,723.22

Elevation (ft) 1422.6' 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
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
SOBM

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Date permit issued 10/10/2017 Date drilling commenced 01/25/2018 Date drilling ceased 04/29/2018
Date completion activities began 08/18/2018 Date completion activities ceased 09/25/2018
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 512' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,930' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,225' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:
DmH
2-21-19

API 47- 103 - 03194 Farm name MARGARET SUE KELLEY Well number MARGARET SUE KELLEY WTZ 1H

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	638'	NEW	J-55/54.50#		Y, 8 BBLS
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25	9.625	2,836'	NEW	J-55/36#		Y, 11.5 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	15,575'	NEW	HCP-110/20#		Y
Tubing		2.375	7,500'	NEW	P-110/4.7#		N
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	596	15.60	1.20	715.2	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	1,148	16.00	1.19	1,366.12	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2,685	15.60	1.19	3,195.15	SURFACE	24
Tubing							

Drillers TD (ft) 15,575' Loggers TD (ft) 15,575'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6,510'

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 _____

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API 47- 103 - 03194 Farm name MARGARET SUE KELLEY Well number MARGARET SUE KELLEY WTZ 1H

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/Gel (units)
	SEE	ATTACHMENT	2					

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PRODUCING FORMATION(S)	DEPTHS		
MARCELLUS	7,155'	TVD	7,366' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 959 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 4,343 mcfpd Oil 115 bpd NGL _____ bpd Water 185 bpd GAS MEASURED BY Estimated Orifice Pilot

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

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

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Logging Company WEATHERFORD
Address 584 HACKERS CREEK RD City JANE LEW State WV Zip 26378

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

Stimulating Company HALLIBURTON
Address 3000 N SAM HOUSTON PKWY E City HOUSTON State TX Zip 77032

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-7632
Signature  Title Staff Regulatory Analyst Date 12/20/2018

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

MARGARET SUE KELLEY WTZ 1H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	7/21/2018	15,485	15,394	33
2	8/19/2018	15,360	15,253	42
3	8/19/2018	15,220	15,113	42
4	8/19/2018	15,080	14,973	42
5	8/19/2018	14,940	14,833	42
6	8/20/2018	14,800	14,693	42
7	8/20/2018	14,660	14,553	42
8	8/20/2018	14,520	14,413	42
9	8/21/2018	14,380	14,273	42
10	8/21/2018	14,240	14,133	42
11	8/21/2018	14,100	13,993	42
12	8/22/2018	13,960	13,853	42
13	8/22/2018	13,820	13,713	42
14	8/22/2018	13,680	13,573	42
15	8/24/2018	13,540	13,433	42
16	8/24/2018	13,400	13,293	42
17	8/24/2018	13,260	13,153	42
18	8/24/2018	13,117	13,013	42
19	8/25/2018	12,980	12,875	42
20	8/27/2018	12,840	12,733	42
21	9/4/2018	12,700	12,593	42
22	9/4/2018	12,560	12,453	42
23	9/5/2018	12,418	12,313	42
24	9/6/2018	12,280	12,173	42
25	9/6/2018	12,140	12,033	42
26	9/7/2018	12,000	11,893	42
27	9/7/2018	11,860	11,753	42
28	9/8/2018	11,717	11,613	42
29	9/8/2018	11,580	11,473	42
30	9/9/2018	11,440	11,333	42
31	9/9/2018	11,300	11,193	42
32	9/9/2018	11,160	11,053	42
33	9/10/2018	11,020	10,913	42
34	9/10/2018	10,880	10,773	42
35	9/11/2018	10,740	10,633	42
36	9/11/2018	10,600	10,493	42
37	9/12/2018	10,460	10,353	42
38	9/12/2018	10,320	10,213	42
39	9/12/2018	10,180	10,073	42
40	9/13/2018	10,040	9,933	42
41	9/14/2018	9,926	9,793	42
42	9/14/2018	9,760	9,653	42

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PERF REPORT

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
43	9/14/2018	9,620	9,513	42
44	9/14/2018	9,480	9,373	42
45	9/15/2018	9,338	9,233	42
46	9/15/2018	9,200	9,093	42
47	9/15/2018	9,060	8,953	42
48	9/15/2018	8,920	8,813	42
49	9/16/2018	8,780	8,673	42
50	9/16/2018	8,640	8,533	42
51	9/16/2018	8,500	8,393	42
52	9/16/2018	8,360	8,253	42
53	9/17/2018	8,220	8,113	42
54	9/17/2018	8,080	7,973	42
55	9/17/2018	7,940	7,858	33
56	9/17/2018	7,818	7,693	42
57	9/18/2018	7,660	7,553	42

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ATTACHMENT 2
STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
1	8/18/2018	80.4	7,484	7,227	3,688	275,560	6,257	0
2	8/19/2018	92.4	8,327	6,007	4,355	281,860	5,019	0
3	8/19/2018	87.7	8,396	6,904	4,609	273,365	4,803	0
4	8/19/2018	86.4	8,195	6,203	4,534	277,860	5,006	0
5	8/20/2018	87.6	7,840	7,280	4,186	279,180	4,944	0
6	8/20/2018	89.7	8,335	6,444	4,002	261,570	4,711	0
7	8/20/2018	89.8	8,230	7,004	4,615	280,160	4,633	0
8	8/20/2018	84.8	7,624	6,235	4,216	283,360	5,621	0
9	8/21/2018	89.7	8,114	5,967	4,408	278,760	4,604	0
10	8/21/2018	84.1	7,695	6,056	4,169	288,370	5,480	0
11	8/22/2018	92.2	8,183	5,917	4,696	283,680	4,896	0
12	8/22/2018	92.4	8,086	6,001	4,628	277,140	4,744	0
13	8/22/2018	95	8,257	5,711	4,366	289,570	4,836	0
14	8/23/2018	85	7,799	5,536	4,362	277,560	4,556	0
15	8/24/2018	91.8	8,147	6,160	4,194	275,320	4,461	0
16	8/24/2018	98	8,251	5,966	4,256	267,760	4,594	0
17	8/24/2018	85.6	7,789	5,799	4,791	272,720	4,485	0
18	8/25/2018	76.9	8,149	5,950	9,040	276,260	5,847	0
19	8/26/2018	80	7,389	5,389	4,974	277,020	8,677	0
20	9/3/2018	89.2	7,762	5,052	4,595	270,940	4,571	0
21	9/4/2018	92	7,946	6,008	3,467	269,760	4,988	0
22	9/4/2018	93.8	8,056	6,265	4,768	284,080	5,535	0
23	9/6/2018	91.1	7,927	6,277	5,531	293,340	5,030	0
24	9/6/2018	86.3	8,028	5,840	5,135	271,640	5,158	0
25	9/7/2018	91.6	7,849	6,215	5,130	283,180	4,946	0
26	9/7/2018	88.4	7,791	6,396	4,982	299,060	4,837	0
27	9/7/2018	87	7,422	6,425	5,075	267,360	5,795	0
28	9/8/2018	90	7,787	5,472	4,811	271,620	4,708	0
29	9/8/2018	92.3	7,662	6,234	5,052	278,220	5,032	0
30	9/9/2018	91.3	7,809	6,607	5,212	274,440	4,965	0
31	9/9/2018	92.2	7,774	5,950	5,141	274,640	5,398	0
32	9/10/2018	92	7,696	6,076	5,160	279,420	4,848	0
33	9/10/2018	90.2	7,484	5,945	5,128	278,540	4,698	0
34	9/11/2018	92.6	7,706	6,048	5,115	280,140	4,826	0
35	9/11/2018	91.9	7,426	5,701	5,119	277,680	4,480	0
36	9/11/2018	91.1	7,659	6,132	4,532	268,180	4,990	0
37	9/12/2018	94.8	7,779	5,561	5,014	275,120	4,497	0
38	9/12/2018	100.5	7,756	6,071	4,879	280,180	4,461	0
39	9/13/2018	99.6	7,791	6,307	5,245	273,620	4,476	0
40	9/14/2018	84.2	7,293	5,860	4,998	272,840	4,930	0
41	9/14/2018	92.1	7,264	5,956	5,102	264,240	4,340	0
42	9/14/2018	93.8	7,331	5,768	5,082	291,760	4,388	0
43	9/14/2018	100.2	7,611	6,378	4,822	277,460	4,609	0
44	9/15/2018	91.7	7,430	5,549	4,932	281,380	4,994	0
45	9/15/2018	89.1	7,193	5,824	4,882	285,540	4,890	0
46	9/15/2018	93.6	7,263	5,975	5,148	298,780	4,535	0
47	9/15/2018	92.4	7,311	6,215	4,603	280,500	4,263	0
48	9/15/2018	98.6	7,551	6,102	4,858	278,000	4,352	0
49	9/16/2018	94.7	7,274	5,618	4,946	271,700	4,301	0
50	9/16/2018	92.1	7,199	5,926	4,904	284,100	4,459	0
51	9/16/2018	100.8	7,403	6,381	4,247	283,120	4,225	0
52	9/17/2018	100.3	7,480	6,964	4,959	276,960	4,124	0
53	9/17/2018	100.1	7,733	6,368	4,815	282,780	4,206	0

MARGARET SUE KELLEY WTZ 1H

ATTACHMENT 2

STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
54	9/17/2018	98.6	7,642	5,801	4,568	262,200	4,279	0
55	9/17/2018	87.4	7,060	5,830	4,498	268,120	4,195	0
56	9/17/2018	99.4	7,266	5,506	4,555	281,960	3,832	0
57	9/18/2018	82.2	8,110	6,250	4,519	283,520	5,156	0

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MARGARET SUE KELLEY WTZ 1H

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Attachment 3

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	512.00	512.00	
Top of Salt Water	1930.00	1930.00	NA	NA	
Pittsburgh Coal	1225.00	1225.00	2225.00	2225.00	
Maxton (ss)	2225.00	2225.00	2424.00	2424.00	
Big Injun (ss)	2424.00	2424.00	2995.00	2995.00	
Berea (siltstone)	2995.00	2995.00	6551.00	6551.00	
Rhinestreet (shale)	6551.00	6551.00	6932.00	6864.00	
Cashaqua (shale)	6932.00	6864.00	7023.00	6944.00	
Middlesex (shale)	7023.00	6944.00	7125.00	7026.00	
Burket (shale)	7125.00	7026.00	7158.00	7049.00	
Tully (ls)	7158.00	7049.00	7194.00	7074.00	
Mahantango (shale)	7194.00	7074.00	7366.00	7155.00	
Marcellus (shale)	7366.00	7155.00	NA	NA	GAS

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/18/2018
Job End Date:	9/18/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-03194-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Margaret Sue Kelley WTZ 1H
Latitude:	39.68863330
Longitude:	-80.69809500
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,136
Total Base Water Volume (gal):	11,516,664
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	83.94114	Density = 8.330
Fresh Water	Operator	Base Fluid					
			Produced Water	7732-18-5	100.00000	1.83912	Density = 9.000

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Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.33471	
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
CI-200	Economy Polymers & Chemicals	Corrosion Inhibitor					
				Listed Below			
Nalco BIOC11139A	Nalco Champion	Biocide					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
IC-001	Economy Polymers & Chemicals	Additive					
				Listed Below			
FDP-S1176-15	Halliburton	Friction Reducer					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					

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				Listed Below			
Nalco SCAL16486A	Nalco Champion	Scale Inhibitor					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	13.81832	
			Hydrochloric acid	7647-01-0	15.00000	0.04217	
			Polyacrylate	Proprietary	30.00000	0.02678	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02678	
			Methanol	67-56-1	80.00000	0.01295	
			Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	30.00000	0.00569	
			9-Octadecenamide, n,n-bis-2(hydroxy-ethyl)-,(Z)	93-83-4	5.00000	0.00446	
			Sobitan, mono-9-octadecenoate, (Z)	1338-43-8	5.00000	0.00446	
			Sodium chloride	7647-14-5	5.00000	0.00446	
			Castor oil, ethoxylated	61791-12-6	5.00000	0.00446	
			Ammonium chloride	12125-02-9	5.00000	0.00446	
			Glutaraldehyde	111-30-8	10.00000	0.00190	
			Amine Triphosphate	Proprietary	30.00000	0.00152	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Ethylene Glycol	107-21-1	30.00000	0.00152	
			Fatty Acids	Trade Secret	10.00000	0.00020	
			Sodium Hydroxide	1310-73-2			
			Nitriloacetic Acid, Trisodium Salt	5064-31-3			

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

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Margaret Sue Kelley WTZ 1H
Wetzel Co, WV
SDC 40
Plan vs Actual

Plan Data for Margaret Sue Kelley WTZ 1H

Plan Point Information: (Scale Factor = 0.999608)
Dogleg Severity Unit: °/100.00ft

MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface	Comments
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)	(°)
0.00	0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.0
26.00	0.00	0.00	26.00	0.00	-0.00	0.00	0.00	0.0	KB Offset
1300.00	0.00	0.00	1300.00	0.00	-0.00	0.00	0.00	0.0	Nudge KOP
1705.34	8.11	220.86	1703.99	-21.65	-18.73	3.10	2.00	220.9	Hold
6660.94	8.11	220.86	6610.06	-550.21	-475.89	78.75	0.00	0.0	Curve KOP
7564.86	90.52	310.02	7176.00	-240.81	-970.90	661.66	10.00	89.1	LP MSK1H
15569.18	90.52	310.02	7104.00	4905.90	-7100.78	8627.31	0.00	0.0	PBHL MSK1H

Target Set Information: (Scale Factor = 0.999608)
Name: Margaret Sue Kelley WTZ 1H
Position offsets from Slot centre

Name	TVD	+N/-S	+E/-W	Northing	Easting	Lat	Long
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(°)
LP MSK1H	7176.00	-240.81	-970.90	14413257.56	1724377.75	39.687981	-80.701548
PBHL MSK1H	7104.00	4907.91	-7103.18	14418404.27	1718247.87	39.702170	-80.723281

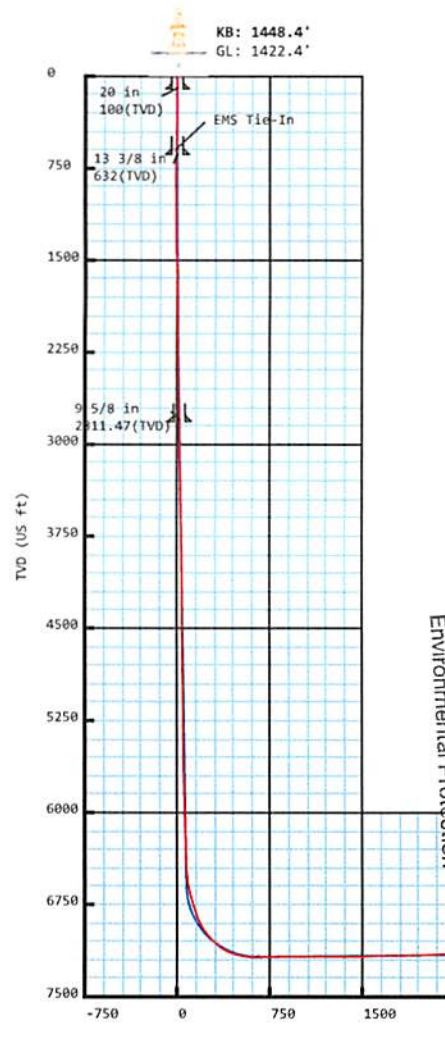


Plan Data for Margaret Sue Kelley WTZ 1H

Formation Point Information:

Name	TVD	Elevation	MD
(USft)	(USft)	(USft)	(USft)
Onondaga Limestone	-5741.00	0.00	-1.00
Base Fresh Water	512.40	936.00	512.40
Pittsburgh Coal	1225.40	223.00	1225.40
Top of Salt Water	1930.40	-482.00	1934.04
Maxton	2200.40	-752.00	2206.76
Big Lime	2312.40	-864.00	2319.89
Big Injun	2398.40	-950.00	2406.76
Base Big Injun	2644.40	-1196.00	2655.24
Berea	2982.40	-1534.00	2996.65
Gordon Sandstone	3173.40	-1725.00	3189.58
Upper Rhinestreet	6523.40	-5075.00	6573.40
Lower Rhinestreet	6589.40	-5141.00	6640.06
Basal Rhinestreet	6724.40	-5276.00	6777.25
Cashaqua	6812.40	-5364.00	6870.01
Middlesex	6922.40	-5474.00	6995.29
Lower Middlesex	6949.40	-5501.00	7028.69
Burket	7008.40	-5560.00	7107.53
Tully	7028.40	-5580.00	7136.75
Mahantango	7051.40	-5603.00	7172.52
Levanna	7139.40	-5691.00	7352.63
Upper Marcellus	7149.40	-5701.00	7383.40

- Margaret Sue Kelley WTZ 1H
- Margaret Sue Kelley WTZ 2H
- Margaret Sue Kelley WTZ 3H
- Margaret Sue Kelley WTZ 4H
- Margaret Sue Kelley WTZ 5H
- Margaret Kelley WTZ 8H
- Margaret Kelley WTZ 10H
- Margaret Kelley WTZ 14H
- Margaret Sue Kelley WTZ 1H



Plan Data for Margaret Sue Kelley WTZ 1H

Field: SOUTHWESTERN_WETZEL CO, WV UTM NAD 83 (17N)
Map Unit: USFt
Vertical Reference Datum (VRD): Mean Sea Level
Projected Coordinate System: NAD83 / UTM zone 17N

Site: Margaret Sue Kelley WTZ Pad
Unit: USFeet
TVD Reference:
Company Name: SOUTHWESTERN ENERGY

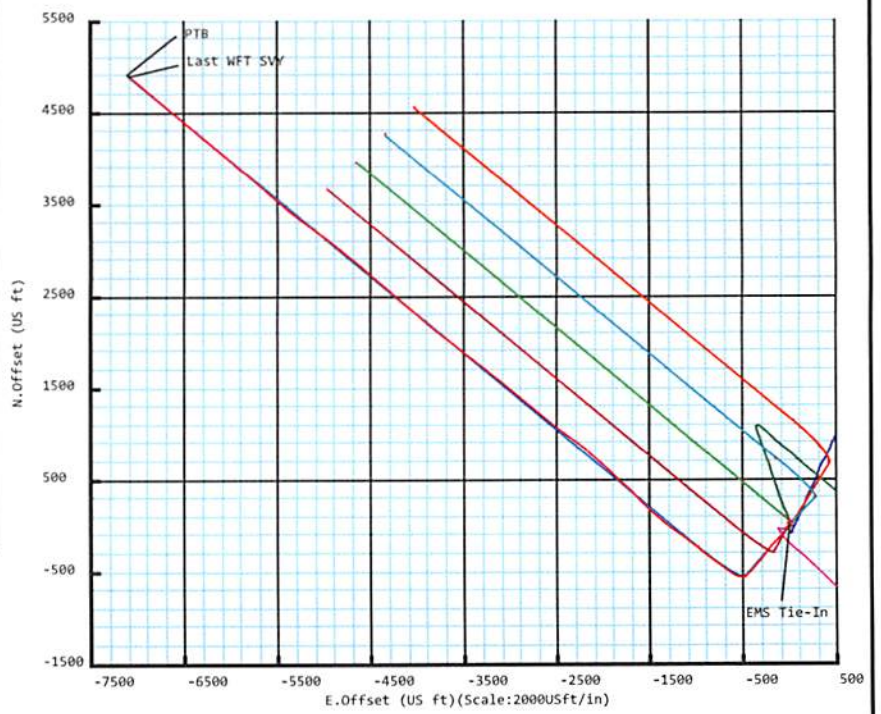
Position:
Northing: 14413498.28USft
Latitude: 39.688633°
Easting: 1725348.27USft
Longitude: -80.698095°
North Reference: Grid
Grid Convergence: 0.19°
Elevation Above VRD: 1422.40USft

Slot: Margaret Sue Kelley WTZ 1H
Position:
Offset is from Site centre
+N/-S: 0.00USft
Northing: 14413498.28USft
Latitude: 39.688633°
+E/-W: 0.00USft
Easting: 1725348.27USft
Longitude: -80.698095°
Elevation Above VRD: 1422.40USft

Well: Margaret Sue Kelley WTZ 1H
Type: Main-Well
File Number:

Plan Folder: P1
Plan: P1:V2
Vertical Section: Position offset of origin from Slot centre:
+N/-S: 0.00USft
Azimuth: 304.64°
+E/-W: 0.00USft

Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
HDGM2016 52294(nT) -7.97° 66.90° 2018-04-02



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True
Grid
Mag

Grid Convergence: 0.19°
Mag Declination: -7.97°
Bearing:
True = Mag - 7.97°
Grid = True - 0.19°
Total Correction to Grid North -8.16°

Drawing By: Vilaphanh (Cot) Sinakone
Date: 29 March 2018
Office Name: Weatherford Drilling Services
Address: 12101 Cutten Road
Houston, TX 77066
Phone: 281-701-4760



Weatherford®

Margaret Sue Kelley WTZ 1H

Field Name: SOUTHWESTER N_WETZEL CO, WV UTM NAD 83 (17N)	Map Units: US ft	Company Name: SOUTHWESTERN ENERGY
	Vertical Reference Datum (VRD): Mean Sea Level	
	Projected Coordinate System: NAD83 / UTM zone 17N	
	Comment:	

Site: Margaret Sue Kelley WTZ Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.19
	Position:	Northing: 14413498.28 US ft	Latitude: 39.688633
		Easting: 1725348.27 US ft	Longitude: -80.698095
	Elevation above MSL: 1422.40 US ft		
Comment:			

Slot: Margaret Sue Kelley WTZ 1H	Position (Relative to Site Centre)		
	+N/-S: 0.00 US ft	Northing: 14413498.28 US ft	Latitude: 39.688633
	+E/-W: 0.00 US ft	Easting: 1725348.27 US ft	Longitude: -80.698095
	Elevation above MSL: 1422.40 US ft		
Comment:			

Well: Margaret Sue Kelley WTZ 1H	Type: Main well	UWI:
	File Number:	Comment:
	Closure Distance: 8635.77 US ft	Closure Azimuth: 304.67°
	Vertical Section: Position of Origin (Relative to Slot centre)	
	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft Az: 304.64°

Drill floor: Survey Name: Definitive Survey			
Rig Height (Drill Floor): 26.00 US ft	Elevation above MSL: 1448.40 US ft	Inclination: 0.00°	Azimuth: 0.00°

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Survey Name: Definitive Survey			
Date: 29/Mar/2018	Survey Tool: See Survey Tool Ranges below.	Comment:	Company:

Magnetic Model:				
Model Name: HDGM2016	Date: 02/Apr/2018	Field Strength: 52294.0 nT	Declination: -7.97°	Dip: 66.90°

Tie Point:					
MD: 0.00 US ft	Inclination: 0.00°	Azimuth: 0.00°	TVD: -0.00 US ft	North Offset: 0.00 US ft	East Offset: -0.00 US ft

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
EMS	0.00	609.00	EMS

5D Survey Report

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
MFAC_US_V2	609.00	1152.00	WFT_MFAC_01
NO SURV 1d	1152.00	1241.00	WFT_MWD_No Svy 1D
MFAC_US_V2	1241.00	1427.00	WFT_MFAC_02
MWD	1427.00	1891.00	WFT_MWD_01
MWD	1891.00	2775.00	WFT_MWD_02
MWD	2775.00	6775.00	WFT_MWD_03
MWD	6775.00	6921.00	WFT_MWD_04
MWD	6921.00	7196.00	WFT_MWD_05
MWD	7196.00	7658.00	WFT_MWD_06
MWD	7658.00	8867.00	WFT_MWD_07
MWD	8867.00	15575.00	WFT_MWD_08

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) (Scale factor 0.999608)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
0.00	0.00	0.00	-0.00	0.00	0.00	-0.00	39.688633	-80.698095	0.00	
215.00	0.20	256.34	215.00	0.25	-0.09	-0.36	39.688633	-80.698096	0.09	
305.00	1.00	106.34	305.00	-0.39	-0.35	0.24	39.688632	-80.698094	1.31	
390.00	1.20	115.44	389.98	-1.97	-0.94	1.75	39.688631	-80.698089	0.31	
468.00	1.20	118.74	467.96	-3.59	-1.68	3.21	39.688629	-80.698084	0.09	
560.00	1.00	140.44	559.95	-5.32	-2.76	4.56	39.688626	-80.698079	0.50	
609.00	1.10	134.54	608.94	-6.20	-3.42	5.17	39.688624	-80.698077	0.30	EMS Tie-In
695.00	1.16	157.26	694.92	-7.74	-4.80	6.09	39.688620	-80.698073	0.52	
784.00	0.73	173.18	783.91	-8.88	-6.20	6.51	39.688616	-80.698072	0.56	
876.00	0.77	231.30	875.90	-9.09	-7.17	6.10	39.688614	-80.698074	0.79	
966.00	0.24	238.82	965.90	-8.84	-7.64	5.46	39.688612	-80.698076	0.59	
1105.00	0.59	35.10	1104.90	-8.73	-7.21	5.63	39.688614	-80.698075	0.59	
1152.00	0.42	27.31	1151.90	-8.71	-6.86	5.84	39.688614	-80.698074	0.39	
1241.00	0.62	239.87	1240.89	-8.46	-6.81	5.58	39.688615	-80.698075	1.12	
1334.00	2.02	237.62	1333.87	-7.60	-7.94	3.76	39.688612	-80.698082	1.51	
1427.00	4.42	224.13	1426.71	-6.37	-11.39	-0.12	39.688602	-80.698096	2.69	
1520.00	6.45	223.72	1519.29	-4.96	-17.74	-6.23	39.688585	-80.698117	2.18	
1612.00	7.89	226.38	1610.57	-2.86	-25.83	-14.37	39.688563	-80.698146	1.61	
1705.00	8.50	227.68	1702.62	-0.01	-34.86	-24.07	39.688538	-80.698181	0.69	
1798.00	8.15	223.79	1794.64	2.59	-44.25	-33.72	39.688512	-80.698215	0.71	
1891.00	8.29	217.93	1886.69	4.02	-54.29	-42.40	39.688485	-80.698246	0.91	
1983.00	8.93	217.82	1977.65	4.80	-65.17	-50.86	39.688455	-80.698277	0.70	
2076.00	8.61	219.27	2069.56	5.76	-76.26	-59.69	39.688425	-80.698308	0.42	
2169.00	5.56	221.51	2161.84	6.86	-85.02	-67.08	39.688401	-80.698334	3.29	
2258.00	4.10	224.84	2250.52	7.94	-90.51	-72.18	39.688386	-80.698353	1.67	
2351.00	4.75	221.63	2343.25	9.00	-95.74	-77.09	39.688371	-80.698370	0.75	
2444.00	6.32	222.55	2435.81	10.17	-102.39	-83.11	39.688353	-80.698392	1.69	
2537.00	6.74	222.30	2528.21	11.61	-110.20	-90.24	39.688332	-80.698417	0.45	
2629.00	6.88	222.01	2619.56	13.03	-118.29	-97.56	39.688310	-80.698443	0.16	
2719.00	6.20	220.37	2708.97	14.21	-126.00	-104.32	39.688288	-80.698467	0.78	
2775.00	5.72	219.76	2764.67	14.76	-130.44	-108.06	39.688276	-80.698481	0.86	
2902.00	5.43	220.01	2891.07	15.89	-139.91	-115.97	39.688250	-80.698509	0.23	
2995.00	5.67	221.92	2983.63	16.88	-146.70	-121.87	39.688232	-80.698530	0.33	
3087.00	7.31	224.70	3075.04	18.48	-154.24	-129.03	39.688211	-80.698555	1.81	
3180.00	7.91	224.96	3167.22	20.66	-162.98	-137.71	39.688187	-80.698586	0.65	
3273.00	7.49	224.04	3259.38	22.80	-171.86	-146.44	39.688163	-80.698617	0.47	
3366.00	7.78	224.13	3351.56	24.82	-180.74	-155.04	39.688139	-80.698648	0.31	
3458.00	9.15	223.96	3442.55	27.03	-190.47	-164.45	39.688112	-80.698682	1.49	
3551.00	9.16	223.51	3534.37	29.37	-201.16	-174.68	39.688083	-80.698718	0.08	
3644.00	8.40	223.70	3626.28	31.59	-211.44	-184.47	39.688055	-80.698753	0.82	
3737.00	8.16	220.71	3718.31	33.35	-221.36	-193.47	39.688027	-80.698785	0.53	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) (Scale factor 0.999608)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (%/100US ft)	Comment
3829.00	9.20	220.35	3809.25	34.77	-231.91	-202.49	39.687999	-80.698817	1.13	
3922.00	9.91	219.57	3900.96	36.20	-243.75	-212.40	39.687966	-80.698853	0.78	
4012.00	9.88	219.59	3989.62	37.53	-255.67	-222.26	39.687934	-80.698888	0.03	
4105.00	9.38	217.69	4081.31	38.63	-267.81	-231.98	39.687900	-80.698923	0.64	
4197.00	9.39	217.37	4172.08	39.38	-279.71	-241.12	39.687868	-80.698955	0.06	
4290.00	8.67	215.52	4263.93	39.85	-291.45	-249.79	39.687836	-80.698986	0.83	
4383.00	8.22	214.23	4355.92	39.91	-302.65	-257.60	39.687805	-80.699014	0.52	
4476.00	8.20	214.29	4447.97	39.82	-313.62	-265.08	39.687775	-80.699041	0.02	
4568.00	8.53	219.57	4538.99	40.37	-324.30	-273.12	39.687746	-80.699069	0.91	
4661.00	8.14	216.66	4631.01	41.19	-334.90	-281.45	39.687717	-80.699099	0.62	
4754.00	8.11	219.17	4723.07	41.94	-345.27	-289.52	39.687688	-80.699128	0.38	
4847.00	8.34	221.30	4815.12	43.24	-355.42	-298.12	39.687660	-80.699159	0.41	
4939.00	8.28	219.88	4906.15	44.62	-365.52	-306.77	39.687633	-80.699189	0.23	
5029.00	8.65	220.86	4995.17	45.95	-375.61	-315.35	39.687605	-80.699220	0.44	
5122.00	9.27	220.93	5087.03	47.53	-386.56	-324.83	39.687575	-80.699254	0.67	
5211.00	9.28	220.17	5174.87	49.00	-397.46	-334.16	39.687545	-80.699287	0.14	
5304.00	9.27	217.55	5266.66	50.11	-409.13	-343.56	39.687513	-80.699321	0.45	
5397.00	9.22	219.08	5358.45	51.06	-420.85	-352.82	39.687481	-80.699354	0.27	
5489.00	9.02	217.81	5449.28	52.03	-432.27	-361.89	39.687450	-80.699386	0.31	
5582.00	9.40	220.58	5541.09	53.22	-443.80	-371.30	39.687418	-80.699420	0.63	
5675.00	9.64	222.10	5632.81	55.02	-455.34	-381.46	39.687387	-80.699456	0.37	
5767.00	9.92	225.63	5723.47	57.53	-466.60	-392.29	39.687356	-80.699495	0.72	
5860.00	10.11	223.61	5815.05	60.33	-478.11	-403.65	39.687325	-80.699535	0.43	
5953.00	9.96	222.24	5906.63	62.67	-489.98	-414.68	39.687292	-80.699574	0.30	
6046.00	9.68	222.87	5998.27	64.85	-501.66	-425.41	39.687260	-80.699613	0.32	
6139.00	8.81	224.93	6090.06	67.24	-512.43	-435.76	39.687231	-80.699650	1.00	
6228.00	9.67	225.39	6177.90	69.85	-522.51	-445.90	39.687203	-80.699686	0.97	
6321.00	10.00	222.83	6269.54	72.46	-533.91	-456.95	39.687172	-80.699725	0.59	
6414.00	8.44	223.23	6361.33	74.63	-544.81	-467.11	39.687142	-80.699761	1.68	
6460.00	7.39	227.57	6406.89	75.80	-549.27	-471.61	39.687130	-80.699777	2.62	
6507.00	7.50	234.34	6453.50	77.51	-553.09	-476.33	39.687119	-80.699794	1.88	
6553.00	8.47	253.07	6499.06	80.62	-555.83	-482.01	39.687112	-80.699814	6.00	
6599.00	9.40	264.52	6544.50	85.60	-557.18	-488.99	39.687108	-80.699839	4.35	
6646.00	11.60	272.03	6590.72	92.52	-557.38	-497.54	39.687108	-80.699870	5.50	
6692.00	14.33	273.99	6635.54	101.31	-556.82	-507.84	39.687109	-80.699906	6.01	
6738.00	16.28	276.70	6679.91	111.91	-555.67	-519.92	39.687113	-80.699949	4.51	
6775.00	17.30	280.46	6715.33	121.51	-554.06	-530.48	39.687117	-80.699987	4.03	
6828.00	17.72	283.97	6765.88	136.25	-550.68	-546.06	39.687127	-80.700042	2.14	
6874.00	18.61	286.60	6809.58	149.78	-546.90	-559.89	39.687137	-80.700091	2.63	
6921.00	21.90	292.44	6853.68	165.48	-541.41	-575.18	39.687152	-80.700145	8.21	
6967.00	25.86	299.78	6895.74	183.87	-533.14	-591.83	39.687175	-80.700204	10.75	
7013.00	29.82	302.88	6936.41	205.31	-521.95	-610.15	39.687206	-80.700269	9.16	
7060.00	36.18	305.34	6975.81	230.89	-507.56	-631.30	39.687246	-80.700344	13.83	
7103.00	40.71	306.08	7009.48	257.61	-491.96	-653.00	39.687289	-80.700421	10.59	
7149.00	45.04	307.12	7043.18	288.88	-473.29	-678.11	39.687340	-80.700510	9.54	
7196.00	49.33	307.04	7075.11	323.32	-452.51	-705.61	39.687398	-80.700608	9.13	
7241.00	55.08	306.52	7102.68	358.84	-431.23	-734.09	39.687456	-80.700709	12.81	
7287.00	63.38	306.68	7126.19	398.31	-407.69	-765.79	39.687521	-80.700821	18.05	
7334.00	70.05	306.56	7144.76	441.43	-381.95	-800.42	39.687592	-80.700944	14.19	
7380.00	74.77	307.22	7158.66	485.23	-355.63	-835.48	39.687665	-80.701068	10.35	
7426.00	79.40	308.14	7168.94	529.99	-328.23	-870.95	39.687740	-80.701194	10.25	
7473.00	83.82	309.03	7175.80	576.37	-299.24	-907.29	39.687820	-80.701322	9.59	
7566.00	91.79	309.99	7179.35	668.89	-240.16	-978.92	39.687983	-80.701576	8.63	
7658.00	90.74	308.35	7177.32	760.57	-182.07	-1050.23	39.688143	-80.701829	2.12	
7698.00	90.99	307.60	7176.72	800.50	-157.46	-1081.76	39.688211	-80.701941	1.98	
7756.00	90.92	306.71	7175.75	858.44	-122.43	-1127.97	39.688308	-80.702104	1.54	
7849.00	90.25	304.90	7174.80	951.41	-68.03	-1203.39	39.688458	-80.702372	2.08	
7939.00	89.38	306.57	7175.09	1041.39	-15.47	-1276.44	39.688603	-80.702631	2.09	
8032.00	89.57	309.10	7175.95	1134.23	41.57	-1349.88	39.688760	-80.702891	2.73	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) (Scale factor 0.999608)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
8125.00	90.00	312.52	7176.29	1226.68	102.34	-1420.26	39.688927	-80.703140	3.71	
8217.00	89.82	312.28	7176.44	1317.83	164.37	-1488.20	39.689098	-80.703381	0.33	
8310.00	90.86	314.72	7175.89	1409.72	228.38	-1555.65	39.689275	-80.703620	2.85	
8357.00	91.23	314.81	7175.03	1455.98	261.48	-1589.02	39.689366	-80.703738	0.81	
8403.00	92.28	316.84	7173.62	1501.08	294.45	-1621.06	39.689457	-80.703852	4.97	
8496.00	93.02	316.99	7169.32	1591.85	362.30	-1684.51	39.689643	-80.704076	0.81	
8589.00	89.45	310.88	7167.32	1683.55	426.77	-1751.43	39.689821	-80.704313	7.61	
8635.00	89.21	309.88	7167.85	1729.32	456.57	-1786.47	39.689903	-80.704437	2.24	
8681.00	90.62	313.04	7167.92	1774.99	487.02	-1820.94	39.689987	-80.704560	7.52	
8728.00	92.34	316.49	7166.71	1821.23	520.10	-1854.29	39.690078	-80.704678	8.20	
8774.00	92.28	315.97	7164.85	1866.26	553.29	-1886.08	39.690169	-80.704790	1.14	
8867.00	90.80	312.39	7162.35	1957.92	618.07	-1952.74	39.690348	-80.705026	4.16	
8881.00	90.86	312.75	7162.15	1971.78	627.54	-1963.05	39.690374	-80.705063	2.61	
8974.00	92.90	311.78	7159.10	2063.91	690.05	-2031.84	39.690546	-80.705307	2.43	
9066.00	92.59	312.17	7154.69	2155.05	751.51	-2100.15	39.690716	-80.705549	0.54	
9159.00	90.74	312.23	7151.99	2247.20	813.95	-2169.02	39.690888	-80.705793	1.99	
9249.00	91.05	308.44	7150.59	2336.73	872.18	-2237.60	39.691048	-80.706036	4.22	
9342.00	90.68	305.67	7149.18	2429.62	928.21	-2311.80	39.691203	-80.706299	3.00	
9435.00	90.55	305.77	7148.18	2522.60	982.50	-2387.30	39.691352	-80.706566	0.18	
9528.00	90.80	307.69	7147.09	2615.53	1038.11	-2461.83	39.691506	-80.706831	2.08	
9620.00	90.74	309.54	7145.85	2707.29	1095.52	-2533.71	39.691664	-80.707085	2.01	
9713.00	90.49	309.74	7144.85	2799.94	1154.85	-2605.32	39.691827	-80.707339	0.34	
9803.00	90.43	309.62	7144.13	2889.58	1212.31	-2674.58	39.691986	-80.707584	0.15	
9899.00	90.92	309.42	7143.00	2985.23	1273.40	-2748.63	39.692154	-80.707847	0.55	
9991.00	90.92	309.88	7141.52	3076.87	1332.09	-2819.46	39.692316	-80.708098	0.50	
10084.00	90.86	309.44	7140.08	3169.50	1391.44	-2891.04	39.692479	-80.708352	0.48	
10177.00	90.62	309.81	7138.88	3262.14	1450.75	-2962.67	39.692643	-80.708605	0.47	
10270.00	90.43	310.78	7138.02	3354.68	1510.89	-3033.60	39.692809	-80.708857	1.06	
10360.00	90.43	309.10	7137.35	3444.29	1568.67	-3102.60	39.692968	-80.709101	1.87	
10452.00	90.43	308.61	7136.66	3536.04	1626.38	-3174.24	39.693127	-80.709355	0.53	
10545.00	90.37	308.72	7136.01	3628.81	1684.48	-3246.85	39.693287	-80.709613	0.13	
10638.00	90.49	308.26	7135.31	3721.59	1742.36	-3319.65	39.693447	-80.709871	0.51	
10727.00	90.49	308.09	7134.55	3810.42	1797.37	-3389.61	39.693598	-80.710119	0.19	
10820.00	90.55	309.00	7133.71	3903.20	1855.31	-3462.34	39.693758	-80.710376	0.98	
10913.00	90.62	309.38	7132.76	3995.90	1914.08	-3534.42	39.693920	-80.710632	0.42	
11006.00	90.43	309.09	7131.90	4088.60	1972.90	-3606.45	39.694082	-80.710887	0.37	
11098.00	90.74	308.46	7130.96	4180.35	2030.51	-3678.17	39.694241	-80.711141	0.76	
11191.00	90.74	308.10	7129.76	4273.16	2088.12	-3751.17	39.694400	-80.711400	0.39	
11284.00	90.80	309.21	7128.51	4365.92	2146.20	-3823.78	39.694560	-80.711657	1.20	
11376.00	90.99	311.16	7127.08	4457.47	2205.56	-3894.06	39.694723	-80.711906	2.13	
11469.00	90.74	312.59	7125.67	4549.72	2267.63	-3963.30	39.694894	-80.712152	1.56	
11562.00	90.68	311.35	7124.52	4641.95	2329.81	-4032.43	39.695066	-80.712397	1.33	
11654.00	90.92	310.05	7123.24	4733.43	2389.80	-4102.17	39.695231	-80.712644	1.44	
11747.00	90.25	311.44	7122.29	4825.89	2450.50	-4172.63	39.695398	-80.712894	1.66	
11840.00	90.49	310.95	7121.69	4918.28	2511.75	-4242.60	39.695567	-80.713142	0.59	
11933.00	90.31	310.47	7121.04	5010.76	2572.40	-4313.10	39.695734	-80.713391	0.55	
12025.00	90.37	309.57	7120.49	5102.35	2631.56	-4383.55	39.695897	-80.713641	0.98	
12118.00	89.82	310.94	7120.34	5194.90	2691.66	-4454.53	39.696063	-80.713893	1.59	
12208.00	89.69	311.50	7120.72	5284.31	2750.96	-4522.22	39.696226	-80.714133	0.64	
12301.00	90.00	311.30	7120.97	5376.66	2812.46	-4591.98	39.696395	-80.714380	0.40	
12390.00	89.82	310.62	7121.11	5465.12	2870.80	-4659.19	39.696556	-80.714618	0.79	
12480.00	89.75	309.02	7121.45	5554.75	2928.44	-4728.31	39.696715	-80.714863	1.78	
12572.00	89.75	308.81	7121.85	5646.49	2986.23	-4799.90	39.696874	-80.715117	0.23	
12665.00	89.63	308.71	7122.35	5739.25	3044.45	-4872.41	39.697035	-80.715374	0.17	
12758.00	89.88	307.60	7122.75	5832.07	3101.90	-4945.54	39.697193	-80.715633	1.22	
12851.00	89.94	307.64	7122.90	5924.95	3158.67	-5019.20	39.697350	-80.715894	0.08	
12943.00	90.06	307.96	7122.90	6016.81	3215.06	-5091.90	39.697505	-80.716152	0.37	
13036.00	89.63	307.62	7123.15	6109.66	3272.05	-5165.39	39.697662	-80.716412	0.59	
13129.00	89.88	306.62	7123.55	6202.58	3328.17	-5239.55	39.697817	-80.716675	1.11	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) (Scale factor 0.999608)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
13222.00	90.31	308.73	7123.39	6295.44	3385.01	-5313.15	39.697974	-80.716936	2.32	
13314.00	90.25	310.09	7122.94	6387.12	3443.41	-5384.23	39.698134	-80.717188	1.48	
13407.00	90.00	311.57	7122.74	6479.57	3504.21	-5454.60	39.698302	-80.717437	1.61	
13500.00	90.31	310.83	7122.49	6571.96	3565.47	-5524.57	39.698471	-80.717685	0.86	
13592.00	89.14	311.56	7122.93	6663.36	3626.06	-5593.80	39.698638	-80.717931	1.50	
13685.00	89.14	312.19	7124.33	6755.61	3688.13	-5663.04	39.698809	-80.718176	0.68	
13778.00	89.38	311.12	7125.53	6847.90	3749.94	-5732.51	39.698979	-80.718422	1.18	
13870.00	89.14	310.88	7126.72	6939.33	3810.29	-5801.94	39.699145	-80.718668	0.37	
13963.00	89.32	310.03	7127.97	7031.84	3870.63	-5872.70	39.699311	-80.718919	0.93	
14056.00	90.49	310.61	7128.12	7124.38	3930.80	-5943.61	39.699477	-80.719170	1.40	
14148.00	90.31	311.03	7127.48	7215.84	3990.94	-6013.23	39.699643	-80.719417	0.50	
14241.00	90.43	310.65	7126.88	7308.30	4051.76	-6083.58	39.699811	-80.719667	0.43	
14334.00	90.25	309.38	7126.33	7400.88	4111.55	-6154.81	39.699975	-80.719919	1.38	
14427.00	90.99	308.68	7125.32	7493.61	4170.11	-6227.04	39.700137	-80.720175	1.10	
14519.00	91.11	309.99	7123.63	7585.28	4228.42	-6298.19	39.700297	-80.720427	1.43	
14612.00	91.67	310.30	7121.38	7677.82	4288.36	-6369.26	39.700463	-80.720679	0.69	
14705.00	91.48	310.86	7118.82	7770.29	4348.83	-6439.86	39.700629	-80.720929	0.64	
14798.00	91.29	310.45	7116.57	7862.75	4409.40	-6510.40	39.700796	-80.721179	0.49	
14890.00	91.17	310.10	7114.60	7954.28	4468.86	-6580.57	39.700960	-80.721428	0.40	
14983.00	91.23	310.37	7112.65	8046.82	4528.92	-6651.55	39.701125	-80.721680	0.30	
15076.00	91.29	309.95	7110.61	8139.37	4588.88	-6722.61	39.701291	-80.721932	0.46	
15168.00	90.62	310.93	7109.07	8230.88	4648.55	-6792.62	39.701455	-80.722180	1.29	
15261.00	90.62	310.15	7108.07	8323.38	4709.00	-6863.29	39.701621	-80.722430	0.84	
15354.00	90.56	310.35	7107.11	8415.93	4769.08	-6934.27	39.701787	-80.722682	0.22	
15446.00	90.68	310.51	7106.11	8507.46	4828.74	-7004.29	39.701951	-80.722930	0.22	
15539.00	90.68	310.57	7105.01	8599.96	4889.19	-7074.96	39.702118	-80.723181	0.06	
15552.00	90.80	310.35	7104.84	8612.89	4897.62	-7084.86	39.702141	-80.723216	1.93	Last WFT SVY
15575.00	90.80	310.35	7104.52	8635.77	4912.51	-7102.38	39.702182	-80.723278	0.00	PTB

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WR-36
Rev. 5/08

Date: 12/20/2018
Operators Well Number: MARGARET SUE KELLEY WTZ 1H
API Well No: 47-103 - 03194

**State of West Virginia
Department of Environmental Protection
Office of Oil and Gas**

Well Operator's Report of
Initial Gas-Oil Ratio

Well Operator SWN PRODUCTION COMPANY LLC Designated Agent _____
Address PO BOX 12359 Address _____
SPRING, TX 77391-2359 _____

Geological Target Formation: MARCELLUS Depth 7,366' MD/7,155' TVD feet
Perforation Interval 7,553' - 15,485' feet

Guidelines for testing:

1. A minimum of gas vented or flared.
2. A 24 hour pre-flow into pipelines or tanks.
3. Uniform producing rate during the 24 hour test per test period.
4. Measurement standards as for Form WR-39, "Report of Annual Production" (see 35CSR4-15)
5. Separate Form WR-36 for each producing formation in a multiple completion.

TEST DATA

Start of Test Date	Time	End of Test Date	Time	Duration of Test
Tubing Pressure	Casing Pressure	Separator Pressure	Separator Temperature	
Oil Production During Test	Gas Production During Test	Water Production During Test		
BBLs	MCF	BBls	-Salinity	
Oil Gravity	Producing Method (flowing, pumping, gas lift etc.)			
API				

GAS PRODUCTION

Measurement Method Flange Tap <input type="checkbox"/> Pipe Tap <input type="checkbox"/> L-10 <input type="checkbox"/>		Positive Choke <input type="checkbox"/>
		Positive flow prover <input type="checkbox"/>
Orifice diameter	Pipe Diameter (inside)	Nominal Choke Size inches 18
Differential Pressure range	Max. Static pressure range	Prover and Orifice diameter - inches
Differential		Static
Gas Gravity (Air = 1.0)	Flowing Temperature	Gas Temperature
Measured	Estimated	
24 Hour Coefficient	24 Hour coefficient pressure PSIA	

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Environmental Protection

TEST RESULTS

Daily Oil 115	Daily Water 185	Daily Gas 4,343	Gas-Oil Ratio
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BY ELIZABETH GEE
Well Operator
ITS: DESIGNATED REPRESENTATIVE

WELL LAYOUT



NTS

LINE	BEARING	DISTANCE
L1	S31°10'00"E	1054.26'
L2	N107°27'29"W	330.83'

SURFACE HOLE LOCATION (SH-L): UTM (NAD83, ZONE 17, METERS): NORTHING: 4363243.05 EASTING: 525887.20
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4393169.68 EASTING: 525591.39
BOTTOM HOLE LOCATION (BH-L): UTM (NAD83, ZONE 17, METERS): NORTHING: 4364738.40 EASTING: 523723.00
SURFACE HOLE LOCATION (SH-L): UTM (NAD83, ZONE 17, METERS): NORTHING: 4393243.11 EASTING: 525887.03
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4393169.88 EASTING: 525588.97
BOTTOM HOLE LOCATION (BH-L): UTM (NAD83, ZONE 17, METERS): NORTHING: 4394739.78 EASTING: 523723.22

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2041



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

OPERATOR'S WELL #: MARGARET SUE KELLEY WTZ 1H

API WELL #: 47 103 03194
STATE COUNTY PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: FISH CREEK
DISTRICT: PROCTOR
SURFACE OWNER: MARGARET SUE KELLEY
OIL & GAS ROYALTY OWNER: BLAKE REALTY, L.L.C.

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

ELEVATION: 1422.6'
QUADRANGLE: WILEYVILLE, WV
ACREAGE: ±18.0
ACREAGE: ±18.0

ESTIMATED DEPTH: 7,179' TD 15,575' TMD

DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

REVISIONS:

DATE	BY	DESCRIPTION
12-06-2018	D. REED	WELL LOCATION PLAN

DRAWN BY: D. REED
SCALE: 1" = 2000'
DRAWING NO: 2016-622

LATITUDE: 39°42'30" SURFACE HOLE

8853'

LATITUDE: 39°42'30" SURFACE HOLE

4192'

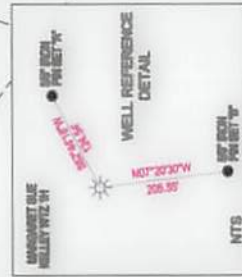
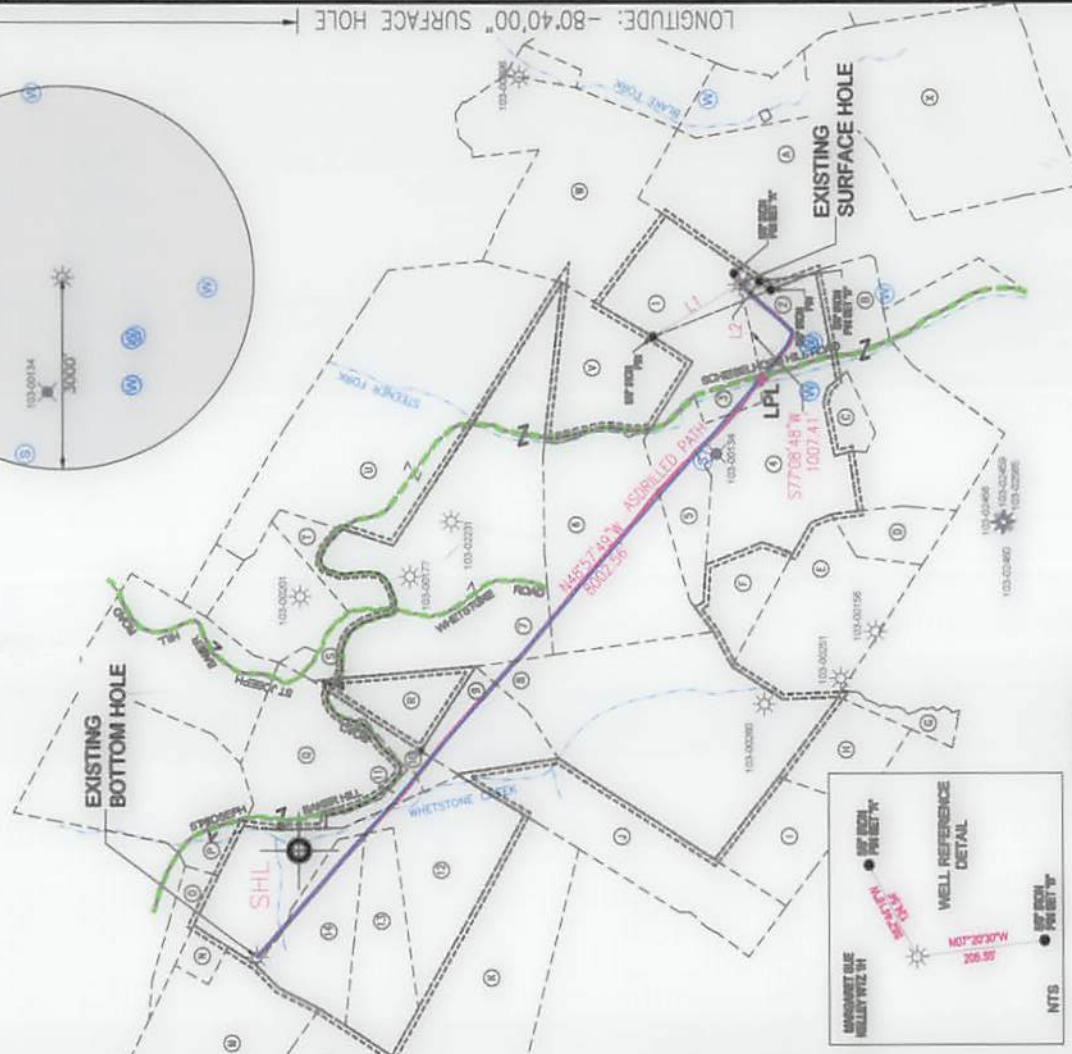
- NOTES ON SURVEY**
- COORDINATE SYSTEM IS UTM AND 83 DATUM, ZONE 17, U.S. FOOT AND WELL COMPANIES ESTABLISHED USING SURVEY GRADE GPS. SURFACE AND ROYALTY OWNERS ARE RESPONSIBLE FOR THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS. THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PROPERTY SHOWN HEREON.
 - NO BUILDINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF ROAD.
 - NO PERMANENT STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY OCCURRING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



7178'

LONGITUDE: -80°42'30" BOTTOM HOLE

LONGITUDE: -80°40'00" SURFACE HOLE



COMPANY: **SWN** Production Company, LLC
Production Company, LLC Production Company™



MARGARET SUE KELLEY WTZ

OPERATOR'S WELL #: 1H

API WELL #: 47 103 03194
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY: 1/200

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

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: FISH CREEK
DISTRICT: PROCTOR
SURFACE OWNER: MARGARET SUE KELLEY
OIL & GAS ROYALTY OWNER: BLAKE REALTY, L.L.C.

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

DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378

REVISIONS:

DATE	BY	DESCRIPTION
12-06-2018	D. REED	WELL LOCATION PLAN

DRAWN BY: D. REED
SCALE: 1" = 2000'
DRAWING NO: 2016-622

PROPERTY NUMBER 2501166356
PNO ID 3001155541

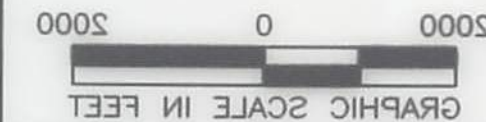
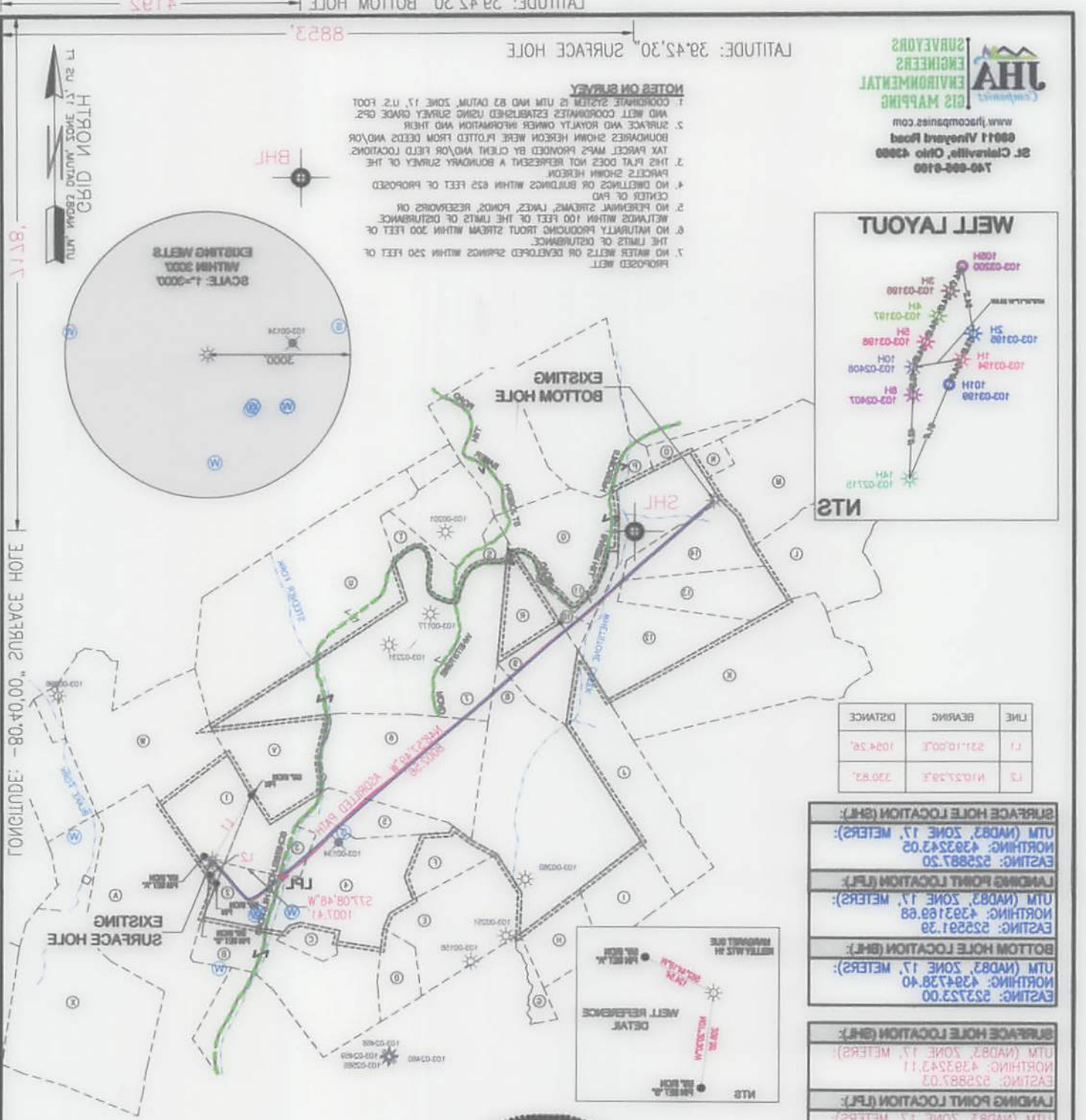
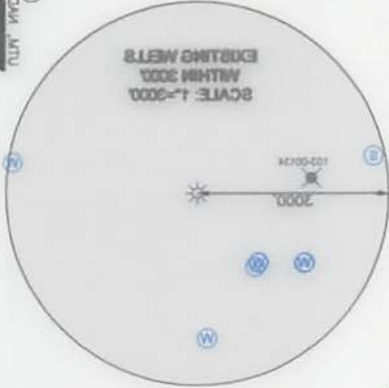


LINE	BEARING	DISTANCE
L1	S21°10'00"E	104+28'
L2	N10°27'29"E	730+83'

LOCATION	EASTING	NORTHING	UTM (NAD83, ZONE 17, METERS)
BOTTOM HOLE LOCATION (BHL)	525232.00	4384738.40	UTM (NAD83, ZONE 17, METERS)
LANDING POINT LOCATION (LPL)	525291.28	4383189.88	UTM (NAD83, ZONE 17, METERS)
SURFACE HOLE LOCATION (SHL)	525887.20	4383243.02	UTM (NAD83, ZONE 17, METERS)

NOTES ON SURVEY

- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- NO OTHER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY OCCURRING TROUT STREAM WITHIN 200 FEET OF WELTAINS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR CENTER OF POND.
- NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF POND.
- PLACES SHOWN HEREON.
- THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
- BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR SURFACE AND ROYALTY OWNER INFORMATION AND THEIR AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- COORDINATE SYSTEM IS UTM AND 83 DATUM, ZONE 17, U.S. FOOT



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PREPARED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

12/14/19
 P.2 SWI

SWN Production Company, LLC
 COMPANY: SWN Production Company, LLC

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JAME LEW STATE: WV ZIP CODE: 26238		DESIGNATED AGENT: BRITANNY WOODY DATE: 12-08-2018	
WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> SHALLOW <input type="checkbox"/>		WATERSHED: FISH CREEK DISTRICT: PROCTOR COUNTY: WETZEL	
WELL LAYOUT: (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WV DEP OFFICE OF OIL & GAS 601 27TH STREET CHARLESTON, WV 25034		WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> SHALLOW <input type="checkbox"/>	
WELL #: 47 STATE: WV COUNTY: WETZEL PERMIT: 103 03194		OPERATOR'S WELL #: 1H MARGARET SUE KELLEY WTS	
WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> SHALLOW <input type="checkbox"/>		WATERSHED: FISH CREEK DISTRICT: PROCTOR COUNTY: WETZEL	
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JAME LEW STATE: WV ZIP CODE: 26238		DESIGNATED AGENT: BRITANNY WOODY DATE: 12-08-2018	
WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> SHALLOW <input type="checkbox"/>		WATERSHED: FISH CREEK DISTRICT: PROCTOR COUNTY: WETZEL	
WELL LAYOUT: (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WV DEP OFFICE OF OIL & GAS 601 27TH STREET CHARLESTON, WV 25034		WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> SHALLOW <input type="checkbox"/>	
WELL #: 47 STATE: WV COUNTY: WETZEL PERMIT: 103 03194		OPERATOR'S WELL #: 1H MARGARET SUE KELLEY WTS	

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS			
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	MARGARET SUE KELLEY (S) BLAKE REALTY, L.L.C. (R)	12-9-28	18.00
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
2	JOSEPH A. HOHMAN	12-9-27	25.00
3	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-26	5.00
4	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-25	48.17
5	JOSEPH A. HOHMAN	12-9-24	21.00
6	LOIS J. ESTEP, A SINGLE WOMAN	12-8-25	65.00
7	ALBERT L. HOHMAN AND MARY L. HOHMAN TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-12	104.48
8	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HUSBAND AND WIFE	12-8-24	63.35
9	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HIS WIFE	12-8-24.3	25.00
10	MATTHEW J. ROHR	12-8-8	8.50
11	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-8.1	5.40
12	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-7	35.0 40.0
13	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-6	25.0
14	HEIRS OF EDWIN R. HOHMAN, DECEASED	12-8-5	24.819

ADJOINING OWNERS TABLE			
TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	MARGARET SUE KELLEY	12-9-29	163.77
B	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-34	52.00
C	THOMAS J. KELLEY AND LISA M. KELLEY, HUSBAND AND WIFE	12-9-47	7.075
D	JOSEPH A. HOHMAN	12-8-38	12.56
E	PATRICK HOHMAN, MICHAEL HOHMAN, JOHN HOHMAN	12-8-37	42.52
F	JOSEPH A. HOHMAN	12-8-24.5	15.50
G	RODNEY L. GODDARD AND JEFFREY L. GODDARD	12-8-24.1	8.50
H	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-36	19.60
I	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HIS WIFE	12-8-24.4	31.25
J	MATTHEW J. ROHR	12-8-24.2	48.65
K	JACOB WOODROW NICE AND MARY JOSEPHINE NICE, HUSBAND AND WIFE	12-8-17	85.69
L	JACOB WOODROW NICE AND MARY JOSEPHINE NICE, HUSBAND AND WIFE	12-8-4.5	51.11
M	RAYMOND F. ESTEP (LIFE ESTATE) AND FRIEND V. ESTEP (REMAINDERMAN)	12-3-33	58.32
N	DAVID L. ESTEP, RAYMOND ESTEP, ALBERT J. ESTEP, WILLIAM ESTEP, GREGORY ESTEP, MICHAEL ESTEP, AND MARY ROSE YOHO (ALL HOLD A LIFE ESTATE); AND DOUGLAS M. ESTEP, DAVID L. ESTEP II, FRIEND V. ESTEP, RICHARD EDWARD ESTEP, TIMOTHY SCOTT ESTEP, LISA E. MULLET, APRIL ROSE POSTLEWAIT, AND STEVEN MICHAEL ESTEP (ALL BEING REMAINDERMAN)	12-3-33.1	4.30
O	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVPCABLE TRUST DATED MARCH 31, 2010	12-3-34	10.00
P	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVPCABLE TRUST DATED MARCH 31, 2010	12-3-35	60.00
Q	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-9	35.60
R	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-10	15.00
S	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-11.3	3.94
T	JOSEPH AND SUSANNA VILLERS (LIFE ESTATE) AND ROBERT FRANCIS VILLERS (REMAINDERMAN)	12-8-11.1	12.00
U	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHUTLER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-1	115.60
V	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHUTLER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-16	35.00
W	MARGARET SUE KELLEY	12-9-17	74.38
X	ROBERT C. PENDLEBURY AND DENISE M. PENDLEBURY	12-9-38	96.52

REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN ^{R₁-V₁+}
Production Company™

OPERATOR'S MARGARET SUE KELLEY WTZ

DATE: 12-06-2018

WELL #: 1H

DRAWN BY: D. REED

DISTRICT:
PROCTOR

COUNTY:
WETZEL

STATE:
WV

SCALE: N/A


DRAWING NO: 2016-622

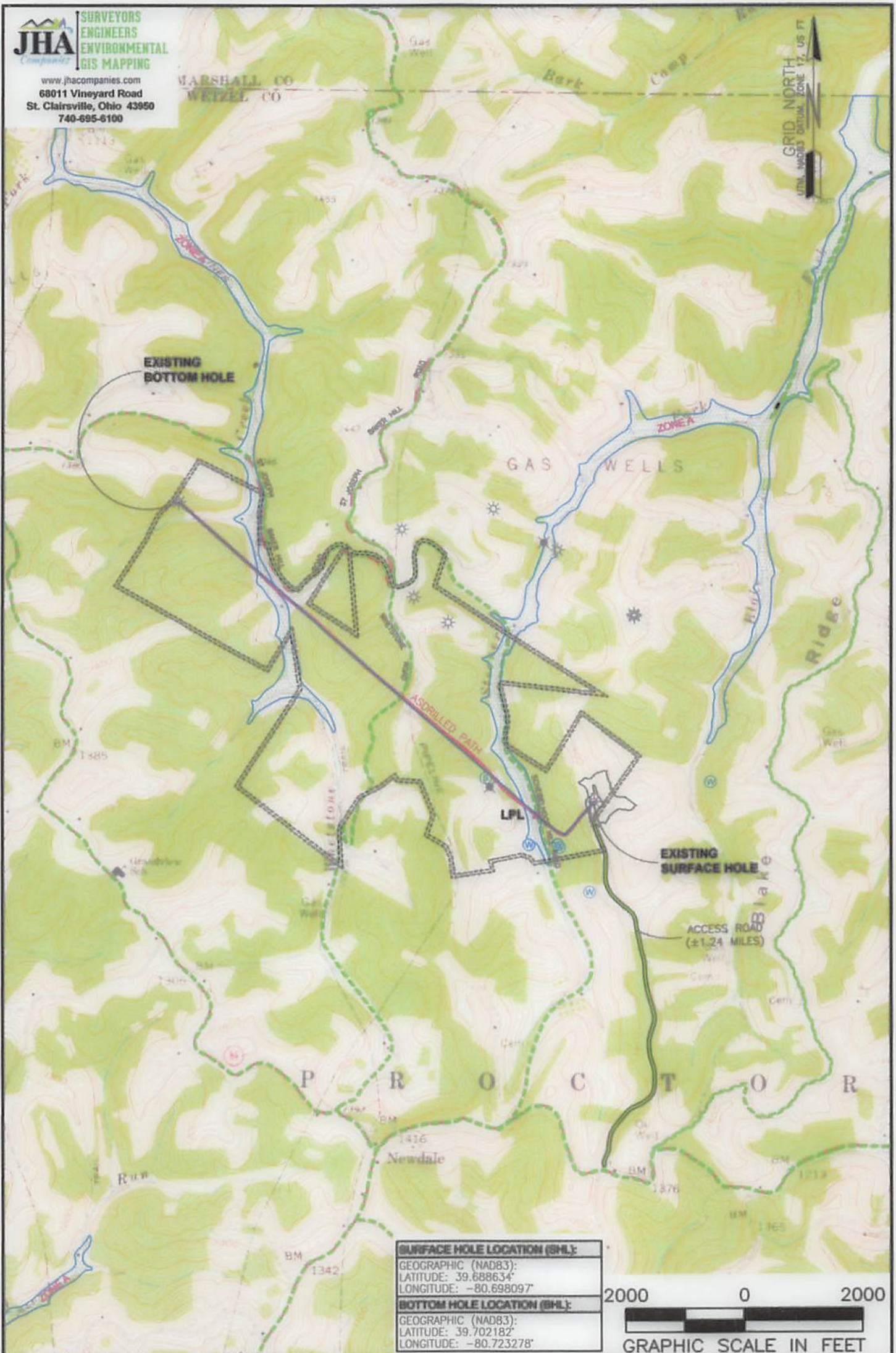
WELL LOCATION PLAT

PROPERTY NUMBER 2501166356
PAD ID 3001155541

TRACT	SURFACE OWNER (S) \ ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	MARGARET SUE KELLEY (S) BLAKE REALTY, L.L.C. (R)	12-9-28	18.00
2	JOSEPH A. HOHMAN	12-9-27	22.00
3	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-26	2.00
4	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-25	48.17
5	JOSEPH A. HOHMAN	12-9-24	21.00
6	LOIS J. ESTEP, A SINGLE WOMAN	12-8-25	62.00
7	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-12	104.48
8	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HUSBAND AND WIFE	12-8-24	62.32
9	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HIS WIFE	12-8-24.3	22.00
10	MATTHEW J. ROHR	12-8-8	8.20
11	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-8.1	2.40
12	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-7	22.0
13	JEREMY S. GODDARD AND ERIN P. GODDARD, HUSBAND AND WIFE	12-8-6	22.0
14	HEIRS OF EDWIN R. HOHMAN, DECEASED	12-8-2	24.819

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	MARGARET SUE KELLEY	12-9-29	163.77
B	THOMAS J. KELLEY AND MARGARET SUE KELLEY, AS JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP	12-9-24	22.00
C	THOMAS J. KELLEY AND LISA M. KELLEY, HUSBAND AND WIFE	12-9-47	7.072
D	JOSEPH A. HOHMAN	12-8-28	12.26
E	PATRICK HOHMAN, MICHAEL HOHMAN, JOHN HOHMAN	12-8-27	42.22
F	JOSEPH A. HOHMAN	12-8-24.2	12.20
G	RODNEY L. GODDARD AND JEFFREY L. GODDARD	12-8-24.1	8.20
H	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-26	19.60
I	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014; JOSEPH A. HOHMAN AND DEBRA K. HOHMAN, HIS WIFE	12-8-24.4	21.22
J	MATTHEW J. ROHR	12-8-24.2	48.62
K	JACOB WOODROW NICE AND MARY JOSEPHINE NICE, HUSBAND AND WIFE	12-8-17	82.69
L	JACOB WOODROW NICE AND MARY JOSEPHINE NICE, HUSBAND AND WIFE	12-8-4.2	21.11
M	RAYMOND F. ESTEP (LIFE ESTATE) AND FRIEND V. ESTEP (REMAINDERMAN)	12-2-23	28.22
N	DAVID L. ESTEP, RAYMOND ESTEP, ALBERT J. ESTEP, WILLIAM ESTEP, GREGORY ESTEP, MICHAEL ESTEP, AND MARY ROSE YOH (ALL HOLD A LIFE ESTATE); AND DOUGLAS M. ESTEP, DAVID L. ESTEP, II, FRIEND V. ESTEP, RICHARD EDWARD ESTEP, TIMOTHY SCOTT ESTEP, LISA E. MULLET, APRIL ROSE POSTLEWAT, AND STEVEN MICHAEL ESTEP (ALL BEING REMAINDERMAN)	12-2-23.1	4.30
O	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVOCABLE TRUST DATED MARCH 21, 2010	12-2-24	10.00
P	ALBERT F. ESTEP, TRUSTEE OF THE ALBERT F. ESTEP IRREVOCABLE TRUST DATED MARCH 21, 2010	12-2-22	60.00
Q	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-9	32.60
R	ALBERT L. HOHMAN AND MARY L. HOHMAN, TRUSTEES OF THE HOHMAN REVOCABLE LIVING TRUST DATED AUGUST 8, 2014	12-8-10	12.00
S	STEVEN RAYMOND HOHMAN AND CATHERINE A. HOHMAN, HUSBAND AND WIFE	12-8-11.2	2.94
T	JOSEPH AND SUSANNA VILLERS (LIFE ESTATE) AND ROBERT FRANCIS VILLERS (REMAINDERMAN)	12-8-11.1	12.00
U	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHULTER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-1	112.60
V	PATRICK A. SCHEIBELHOOD; THEODORE N. SCHEIBELHOOD; EDWARD L. SCHEIBELHOOD; THERESA SHULTER; CLARA SCHEIBELHOOD; MARGARET SCHEIBELHOOD; MARSHA ECHARD; MARK SCHEIBELHOOD; MATTHEW SCHEIBELHOOD; NICHOLAS SCHEIBELHOOD	12-9-16	22.00
W	MARGARET SUE KELLEY	12-9-17	74.38
X	ROBERT C. PENDLEBURY AND DENISE M. PENDLEBURY	12-9-28	98.22

		COMPANY:		REVISIONS:	
DATE: 12-08-2018		OPERATOR'S: MARGARET SUE KELLEY WTS			
DRAWN BY: D. REED		WELL #: 1H			
SCALE: N/A		DISTRICT:			
DRAWING NO: 2018-822		COUNTY: WETZEL			
WELL LOCATION PLAT		STATE: WV			
PROPERTY NUMBER 250116826					
PWD ID 200112241					



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.688634°
LONGITUDE: -80.698097°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.702182°
LONGITUDE: -80.723278°



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- LPL*
- LANDING POINT LOCATION
- FLOOD PLAN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH
- AS-DRILLED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: MARGARET SUE KELLEY WTZ	WELL # 1H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY - CODE WETZEL - 103	DISTRICT: PROCTOR	
SURFACE OWNER: MARGARET SUE KELLEY	USGS 7 1/2 QUADRANGLE MAP NAME: WILEYVILLE, WV		

ИМЪСЪВЕЛ 2НЕ КЕТТА СУБЪСЦЕ ОМНЕВ: Б'О' BOX 1300 'ИМЕ ГЕМ' МА 30238 ADDRESS: 2ММ БЪЛОСЛОБ СОМЪНН' ПТС МЕТТ ОБЪСЪУЛОВ:	ИМЕЛАИТЕ МА У2С2 3 1/3 ОИДЪСМСТЕ ИМЪ ИММЕ: МЕТТЕЛ - 102 СОМПА - CODE БЪЛОСЛОБ ДИСТРИКТ: ИМЪСЪВЕЛ 2НЕ КЕТТА МЪС МЕТТ (БЪСН) ИММЕ:	ИМ XXXX ЗЕРИТ
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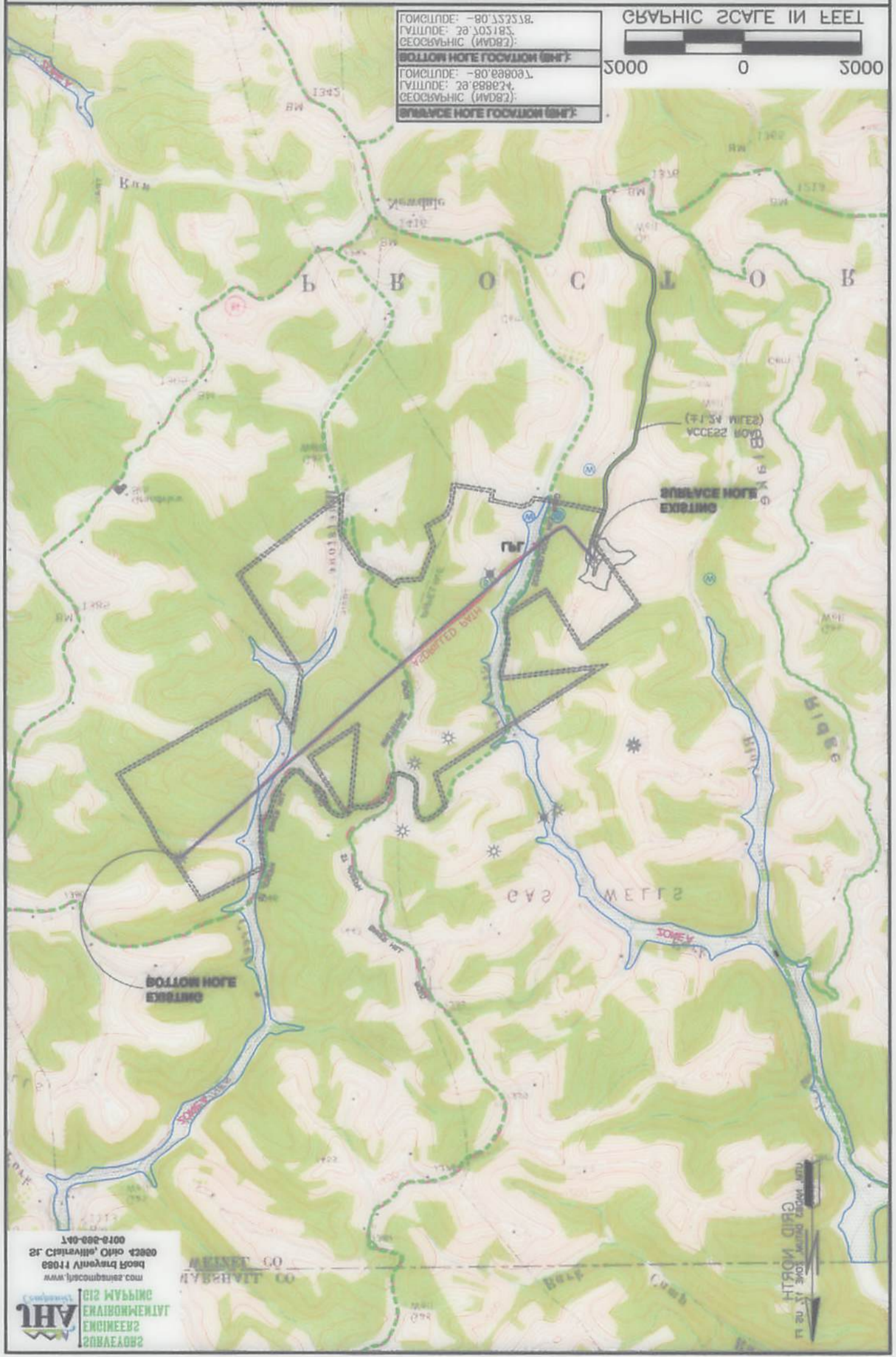
7 УТ ИМЕ12 ИМЕ ОИД ИОБН ИМЕ22 ОИМЕИМЕ ДЕКТЕД
БЪСЦЕ2 2НОМН НЕБЕОН
5 ИМЕ БУД ДОО2 ИОТ НЕБРЕЗЕНТ А ВОПНОМА 2ИМАХ ОЕ ИМЕ
ГОСУДИ2
ИМО'ОБ ДУХ БЪСЦЕ2 ИМЪ2 ИМОИДЕД БУ СТЕИ ИМО'ОБ ИЕИД
ВОПНОМА2 2НОМН НЕБЕОН ИМЕ БЪОЛЕД ИМО ДОО2
1' 2ИМАХ ИМО ИМОИТЪ ОИМЕИ ИМОИМАИ ИМО ИМЕ
ИМОТЕ2 ОИ 2ИМАХ

LEGEND:

- GOOD БУИ
- ГЪ: ГИДИС БОИД ГОСУДИ
- EXISTING \ БЪЛОСЛОБ ИММЕИД
- БЪЛОСЛОБ 2ИМАХ ИОТЕ \ ВОСЪИМАИТЕ
- УСЪИТЕД БУИ
- БЪЛОСЛОБ БУИ
- ГЕУ2Е ВОПНОМА
- УСЦЕ2 БОИД 1О БРЕЛ 2ИЕ
- БЪЛОБ БОИД
- УСЦЕ2 БОИД

ГОИСПУДЕ: -80.252328.
ГУШЛУДЕ: 38.205185.
БЕОСЪБЪИС (ИМД82):
БОТТОМ ИОТЕ ГОСУДИОИ (ИМГ):
ГОИСПУДЕ: -80.288022.
ГУШЛУДЕ: 38.288024.
БЕОСЪБЪИС (ИМД82):
2ИМАХ ИОТЕ ГОСУДИОИ (ИМГ):

GRAPHIC SCALE IN FEET



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