

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

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WV Department of
Environmental Protection

API 47-069-00291 County OHIO District RICHLAND
Quad TILTONSVILLE, OH Pad Name EDWARD DREMAK-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name ANDREW JOHN EVICK Well Number EDWARD DREMAK OHI 605H
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 4,445,419.65 Easting 529,678.56
Landing Point of Curve Northing 4,445,867.79 Easting 530,537.88
Bottom Hole Northing 4,449,399.07 Easting 529,498.99

Elevation (ft) 1,087.5' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

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

Date permit issued 12/7/2018 Date drilling commenced 4/1/2019 Date drilling ceased 4/2/2019
Date completion activities began 4/11/2019 Date completion activities ceased 6/9/2019
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 259' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 750' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 270' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:
9/10/16/19

[Handwritten signature] 10-16-19

API 47-069 - 00291 Farm name ANDREW JOHN EVICK Well number EDWARD DREMAK OHI 605H

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	352	NEW	J-55/54.5#	231.2'	Y
Coal							
Intermediate 1	12.25	9.625	1,652	NEW	J-55/36#		Y
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	19,174	NEW	HCP-110/20#		Y
Tubing		2.375	6,990	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	442	15.60	1.20	530.40	SURFACE	8
Coal							
Intermediate 1	CLASS A	661	15.60	1.20	793.20	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,620	15.60	1.19	4,307.80	SURFACE	24
Tubing							

Drillers TD (ft) 19,174' Loggers TD (ft) 19,174'

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

Plug back procedure N/A

Kick off depth (ft) 5,774'

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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PRODUCING FORMATION(S)	DEPTHS	
MARCELLUS	5,776'	TVD 6,836' MD

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Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1,392 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 3,495 mcfpd Oil 978 bpd NGL _____ bpd Water 1,716 bpd GAS MEASURED BY Estimated Orifice Pilot

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

Please insert additional pages as applicable.

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

Logging Company BAKER HUGHES
 Address 9110 GROGANS MILL RD City THE WOODLANDS State TX Zip 77380

Cementing Company SCHLUMBERGER WELL SERVICES
 Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478

Stimulating Company SWN WELL SERVICES
 Address PO BOX 12359 City SPRING State TX Zip 77391

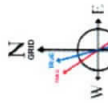
Please insert additional pages as applicable.

Completed by DENISE GRANTHAM Telephone 832-796-6139
 Signature *Denise Grantham* Title REGULATORY TECHNICIAN Date 8/29/2019

SOUTHWESTERN ENERGY

Location: Ohio County, WV
 Slot #605H
 Field: Edward Dremak OHI 605H
 Well: Edward Dremak OHI 605H PWB
 Facility: Edward Dremak OHI Pad Wellbore

Plot reference wellpath is Edward Dremak OHI 605H PWP Rev-A.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 40 (KB)	North Reference: Grid north
Measured depths are referenced to SDC 40 (KB)	Scale: True distance
SDC 40 (KB) to Mean Sea Level: 1113.4 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot, Slot #605H): -1087.4 feet	Created by: alenjan on 2019-03-19
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERNUS_Defn

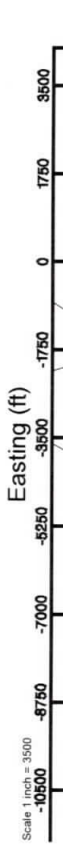
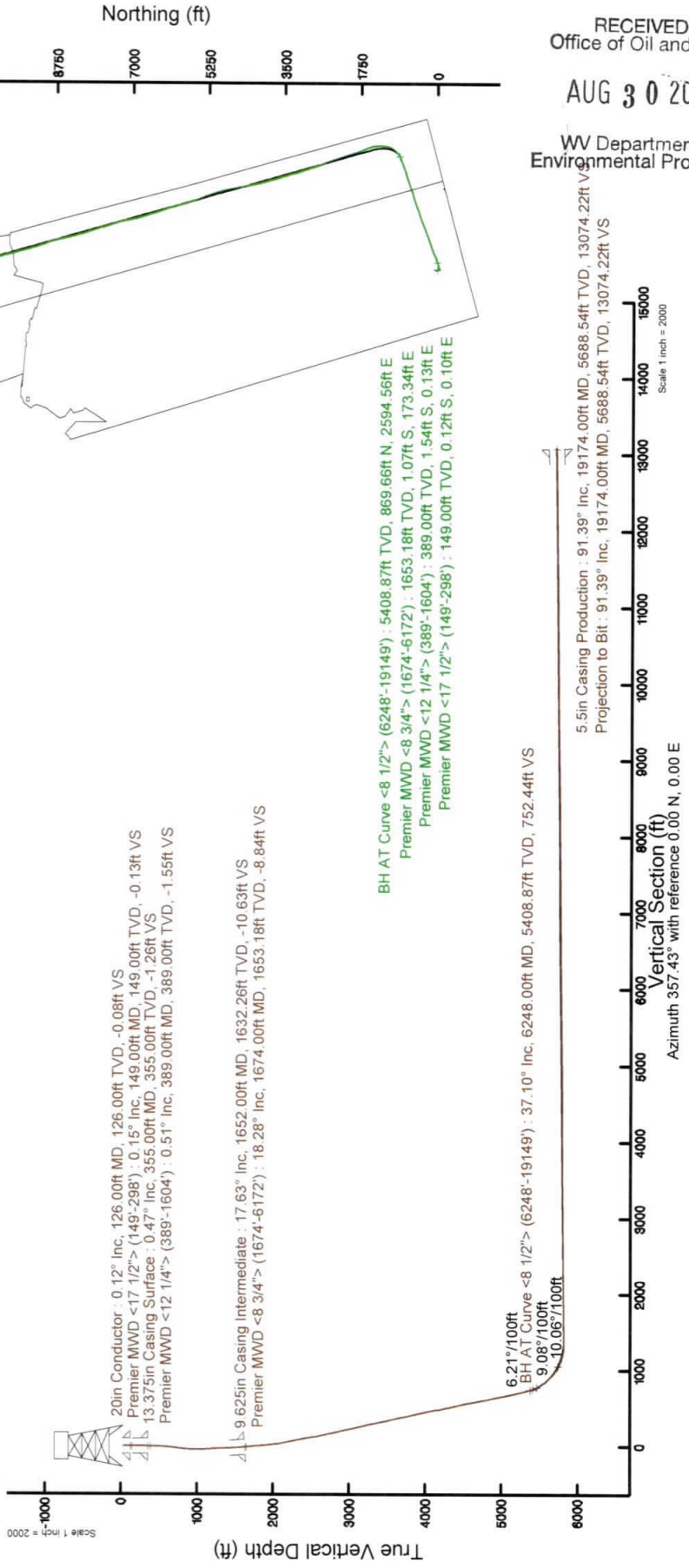


User specified Dip: 67.48° Field: 52937 AT
 Magnetic North is 8.02 degrees West of True North (at 22F-ab2019)
 To correct azimuth from Magnetic to Grid subtract 8.24 degrees
 To correct azimuth from Magnetic to True subtract 8.24 degrees

20in Conductor : 0.12° Inc, 126.00ft MD, 126.00ft TVD, -0.08ft VS
 Premier MWD <17 1/2" > (149'-298') : 0.15° Inc, 149.00ft MD, 149.00ft TVD, -0.13ft VS
 13.375in Casing Surface : 0.47° Inc, 355.00ft MD, 355.00ft TVD, -1.26ft VS
 Premier MWD <12 1/4" > (389'-1604') : 0.51° Inc, 389.00ft MD, 389.00ft TVD, -1.55ft VS
 9.625in Casing Intermediate : 17.63° Inc, 1652.00ft MD, 1632.26ft TVD, -10.63ft VS
 Premier MWD <8 3/4" > (1674'-6172') : 18.28° Inc, 1674.00ft MD, 1653.18ft TVD, -8.84ft VS

BH AT Curve <8 1/2" > (6248'-19149') : 5408.87ft TVD, 869.66ft N, 2594.56ft E
 Premier MWD <8 3/4" > (1674'-6172') : 1653.18ft TVD, 1.07ft S, 173.34ft E
 Premier MWD <12 1/4" > (389'-1604') : 389.00ft TVD, 1.54ft S, 0.13ft E
 Premier MWD <17 1/2" > (149'-298') : 149.00ft TVD, 0.12ft S, 0.10ft E

6.21°/100ft
 BH AT Curve <8 1/2" > (6248'-19149') : 37.10° Inc, 6248.00ft MD, 5408.87ft TVD, 752.44ft VS
 9.08°/100ft
 10.06°/100ft
 5.5in Casing Production : 91.39° Inc, 19174.00ft MD, 5688.54ft TVD, 13074.22ft VS
 Projection to Bit : 91.39° Inc, 19174.00ft MD, 5688.54ft TVD, 13074.22ft VS
 Vertical Section (ft)
 Azimuth 357.43° with reference 0.00 N, 0.00 E



Projection to Bit : 5688.54ft TVD, 13060.93ft N, 589.38ft W

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Edward Dremak OHI Pad	1737740.826	14584704.331	40°09'31.223"N	80°39'06.011"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Grid East (US ft)
Slot #605H	-23.38	46.27	1737787.082	14584680.964
SDC 40 (KB) to Ground level (At Slot, Slot #605H)	26ft			
Mean Sea Level to Ground level (At Slot, Slot #605H)	-1087.4ft			
SDC 40 (KB) to Mean Sea Level	1113.4ft			

Comments

API: 47-069-00291-0000
 BH Job #: 109652154
 Rig: SDC 40
 Duration: 02/23/2019 - 02/27/2019



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ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	4/5/2019	19,086	18,989	36
2	4/11/2019	18,956	18,849	42
3	4/12/2019	18,818	18,709	42
4	4/12/2019	18,676	18,569	42
5	4/12/2019	18,536	18,427	42
6	4/12/2019	18,396	18,289	42
7	4/12/2019	18,256	18,149	42
8	4/13/2019	18,116	18,016	42
9	4/13/2019	17,976	17,869	42
10	4/13/2019	17,836	17,735	42
11	4/13/2019	17,696	17,589	42
12	4/14/2019	17,556	17,449	42
13	4/14/2019	17,412	17,309	42
14	4/14/2019	17,276	17,164	42
15	4/14/2019	17,136	17,029	42
16	4/14/2019	16,996	16,924	33
17	4/15/2019	16,891	16,766	42
18	4/15/2019	16,733	16,609	42
19	4/15/2019	16,576	16,469	42
20	4/15/2019	16,432	16,329	42
21	4/17/2019	16,296	16,189	42
22	4/17/2019	16,156	16,049	42
23	4/17/2019	16,016	15,905	42
24	4/18/2019	15,876	15,769	42
25	4/18/2019	15,736	15,619	84
26	4/19/2019	15,596	15,486	42
27	4/19/2019	15,456	15,349	42
28	4/19/2019	15,316	15,209	42
29	4/19/2019	15,176	15,066	42
30	4/19/2019	15,036	14,929	42
31	4/20/2019	14,896	14,789	42
32	4/20/2019	14,756	14,649	42
33	4/20/2019	14,616	14,509	42
34	4/21/2019	14,476	14,369	42
35	4/21/2019	14,336	14,229	42
36	4/21/2019	14,196	14,089	42
37	4/21/2019	14,056	13,949	42
38	4/21/2019	13,916	13,809	42
39	4/22/2019	13,780	13,669	42
40	4/22/2019	13,636	13,529	42
41	4/23/2019	13,496	13,389	42
42	4/23/2019	13,353	13,249	42

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STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
43	4/24/2019	13,216	13,109	42
44	4/24/2019	13,076	12,969	42
45	4/24/2019	12,936	12,829	42
46	4/24/2019	12,796	12,689	42
47	4/25/2019	12,656	12,549	42
48	4/25/2019	12,516	12,411	42
49	4/25/2019	12,376	12,269	42
50	4/26/2019	12,236	12,127	42
51	4/26/2019	12,098	11,989	42
52	4/26/2019	11,956	11,849	42
53	4/26/2019	11,816	11,709	42
54	4/27/2019	11,676	11,569	42
55	4/27/2019	11,536	11,429	42
56	4/27/2019	11,396	11,289	42
57	4/27/2019	11,256	11,151	42
58	4/28/2019	11,116	11,009	42
59	4/28/2019	10,976	10,866	42
60	4/28/2019	10,838	10,729	42
61	4/28/2019	10,696	10,589	42
62	4/29/2019	10,556	10,449	42
63	4/29/2019	10,416	10,309	42
64	4/29/2019	10,276	10,174	42
65	4/29/2019	10,136	10,029	42
66	4/30/2019	9,996	9,889	42
67	4/30/2019	9,856	9,749	42
68	4/30/2019	9,716	9,609	42
69	4/30/2019	9,576	9,468	42
70	5/1/2019	9,439	9,329	42
71	5/1/2019	9,296	9,189	42
72	5/1/2019	9,156	9,049	42
73	5/2/2019	9,016	8,909	42
74	5/2/2019	8,876	8,769	42
75	5/2/2019	8,733	8,629	42
76	5/2/2019	8,596	8,489	42
77	5/3/2019	8,456	8,349	42
78	5/3/2019	8,316	8,209	42
79	5/3/2019	8,176	8,069	42
80	5/4/2019	8,036	7,929	42
81	5/4/2019	7,896	7,789	42
82	5/4/2019	7,756	7,649	42
83	5/4/2019	7,616	7,509	42
84	5/5/2019	7,476	7,369	42

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PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
85	5/5/2019	7,336	7,229	42
86	5/5/2019	7,200	7,089	42
87	5/5/2019	7,056	6,949	42

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EDWARD DREMAK OHI 605H
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/othr
1	4/11/2019	78	7,685	7,406	4,478	280,652	8,302	0
2	4/11/2019	92	8,061	4,694	4,605	279,332	8,467	0
3	4/12/2019	93	7,823	4,576	5,289	282,991	6,859	0
4	4/12/2019	91	8,024	5,019	4,830	280,925	7,898	0
5	4/12/2019	88	8,088	4,196	4,618	279,922	7,605	0
6	4/12/2019	89	7,711	5,261	4,608	282,254	6,411	0
7	4/12/2019	85	7,838	5,535	4,794	280,019	6,161	0
8	4/13/2019	83	7,696	5,462	4,923	279,081	6,156	0
9	4/13/2019	73	7,849	5,837	4,564	288,820	8,199	0
10	4/13/2019	84	7,846	5,907	4,654	293,114	6,867	0
11	4/13/2019	79	8,115	5,643	4,203	277,330	5,566	0
12	4/14/2019	85	7,768	5,584	4,594	279,790	6,046	0
13	4/14/2019	91	8,156	5,641	4,890	279,696	5,939	0
14	4/14/2019	85	8,078	5,347	4,693	283,373	6,978	0
15	4/14/2019	87	7,919	5,360	4,979	280,411	5,755	0
16	4/14/2019	75	8,228	5,180	4,369	285,900	5,793	0
17	4/15/2019	78	7,992	5,597	4,552	280,400	7,186	0
18	4/15/2019	82	7,960	5,505	4,474	277,856	6,967	0
19	4/15/2019	86	8,319	5,631	4,523	287,300	5,676	0
20	4/17/2019	70	7,580	5,403	4,100	281,847	8,872	0
21	4/17/2019	82	7,405	5,399	4,964	275,686	5,922	0
22	4/17/2019	86	8,032	4,882	4,310	279,846	4,915	0
23	4/17/2019	85	8,175	5,373	4,523	276,370	4,627	0
24	4/18/2019	89	8,139	5,254	4,860	282,520	4,576	0
25	4/18/2019	64	7,173	5,560	4,320	285,720	12,647	0
26	4/19/2019	82	8,130	4,928	4,241	282,595	5,332	0
27	4/19/2019	86	7,957	6,009	4,750	283,715	5,921	0
28	4/19/2019	80	7,845	5,991	4,785	276,970	5,495	0
29	4/19/2019	87	8,231	5,019	4,206	278,230	4,884	0
30	4/19/2019	87	7,942	4,789	4,539	273,250	5,171	0
31	4/20/2019	85	8,003	4,611	4,615	288,760	4,422	0
32	4/20/2019	98	7,819	4,876	4,840	277,720	4,954	0
33	4/20/2019	88	8,021	5,003	4,356	280,515	5,303	0
34	4/21/2019	89	8,039	4,994	4,414	280,325	5,136	0
35	4/21/2019	92	7,724	5,305	4,948	280,300	4,477	0
36	4/21/2019	89	7,702	5,897	4,151	287,430	5,419	0
37	4/21/2019	86	7,976	4,809	4,472	273,495	4,088	0
38	4/21/2019	87	7,921	5,431	4,419	278,165	4,131	0
39	4/22/2019	85	7,855	5,080	4,723	287,020	3,829	0
40	4/22/2019	91	7,699	5,987	4,561	284,080	5,577	0
41	4/23/2019	94	7,961	5,341	4,154	284,675	5,337	0
42	4/23/2019	80	8,167	4,612	4,352	281,409	8,155	0
43	4/24/2019	90	8,034	4,718	4,803	275,682	5,177	0
44	4/24/2019	96	7,895	5,986	4,550	279,000	5,135	0
45	4/24/2019	97	7,582	5,315	4,431	284,965	5,396	0
46	4/24/2019	93	7,774	5,206	4,618	278,005	5,561	0
47	4/25/2019	92	8,182	4,769	5,094	287,990	5,110	0
48	4/25/2019	97	7,879	5,873	4,121	291,295	4,822	0
49	4/25/2019	95	7,895	5,022	4,624	272,830	4,787	0
50	4/26/2019	95	7,808	4,970	4,687	286,590	4,731	0
51	4/26/2019	94	7,738	5,922	4,751	287,960	4,497	0
52	4/26/2019	94	7,891	5,549	4,756	278,845	4,749	0
53	4/26/2019	95	7,815	5,062	5,088	285,520	4,740	0

**EDWARD DREMAK OHI 605H
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	4/27/2019	96	7,245	5,678	7,961	285,110	4,682	0
55	4/27/2019	91	7,672	5,619	4,478	277,125	4,631	0
56	4/27/2019	92	8,151	5,055	4,712	275,988	4,441	0
57	4/28/2019	94	7,996	4,889	4,821	284,600	4,328	0
58	4/28/2019	87	7,800	5,993	4,833	277,375	5,521	0
59	4/28/2019	91	7,802	5,701	4,703	280,190	5,211	0
60	4/28/2019	90	7,977	4,709	4,833	288,710	4,457	0
61	4/28/2019	98	9,877	4,898	4,901	287,320	4,369	0
62	4/29/2019	94	7,558	5,238	4,492	288,320	4,331	0
63	4/29/2019	93	7,716	5,268	4,489	276,718	3,815	0
64	4/29/2019	91	7,689	4,767	4,807	284,430	4,186	0
65	4/30/2019	87	7,711	4,847	4,777	291,780	4,175	0
66	4/30/2019	94	7,263	5,900	4,558	288,660	4,276	0
67	4/30/2019	84	6,790	5,592	3,925	275,045	4,376	0
68	4/30/2019	90	7,611	5,086	4,896	284,630	4,075	0
69	5/1/2019	93	7,499	5,012	4,462	287,820	4,248	0
70	5/1/2019	92	7,451	5,260	4,577	286,740	3,959	0
71	5/1/2019	94	6,976	5,291	4,609	288,680	4,258	0
72	5/1/2019	92	7,134	5,890	5,055	278,967	3,956	0
73	5/2/2019	95	7,527	5,207	4,389	274,884	4,256	0
74	5/2/2019	93	7,235	5,384	4,610	288,390	3,914	0
75	5/2/2019	94	7,274	5,262	4,777	279,218	3,529	0
76	5/2/2019	69	6,457	5,536	4,716	287,300	6,929	0
77	5/3/2019	91	7,344	5,019	4,602	283,552	3,929	0
78	5/3/2019	92	7,453	5,382	4,878	286,730	4,317	0
79	5/3/2019	94	7,384	5,715	4,641	275,750	4,396	0
80	5/4/2019	100	7,084	5,617	4,548	284,444	3,288	0
81	5/4/2019	93	6,946	5,299	4,515	283,232	4,274	0
82	5/4/2019	91	6,725	5,320	4,516	278,442	4,019	0
83	5/4/2019	92	7,469	5,247	4,516	283,512	4,426	0
84	5/5/2019	92	7,267	5,804	533	298,562	4,089	0
85	5/5/2019	91	6,994	4,910	4,578	276,721	4,226	0
86	5/6/2019	88	6,953	5,705	4,942	271,530	4,183	0
87	5/6/2019	96	6,087	4,664	4,825	287,380	3,961	0

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Well Name: Edward Dremak OHI 605H 47069002910000

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	259.00	259.00	
Top of Salt Water	750.00	750.00	NA	NA	
Pittsburgh Coal	270.00	270.00	276.00	276.00	
Pottsville (ss)	374.00	374.00	459.00	459.00	
Mauch Chunk (shale)	477.00	477.00	1300.00	1300.00	
Raven Cliff (ss)	777.00	777.00	912.00	912.00	
Maxton (ss)	1068.00	1068.00	1232.00	1232.00	
Greenbriar (ls)	1300.00	1300.00	1369.00	1369.00	
Big Injun (ss)	1369.00	1369.00	1576.00	1576.00	
Rhinestreet (shale)	6071.00	5271.00	6485.00	5579.00	
Middlesex (shale)	6485.00	5579.00	6543.00	5617.00	
Burket (shale)	6543.00	5617.00	6571.00	5635.00	
Tully (ls)	6571.00	5635.00	6651.00	5686.00	
Mahantango (shale)	6651.00	5686.00	6836.00	5776.00	
Marcellus (shale)	6836.00	5776.00	NA	NA	GAS

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/11/2019
Job End Date:	5/6/2019
State:	West Virginia
County:	Ohio
API Number:	47-069-00291-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Edward Dremak OHI 605
Latitude:	40.15860839
Longitude:	-80.65150450
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	5,688
Total Base Water Volume (gal):	19,176,294
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
Econo-CI200	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Ecopol-FEAC	SWN Well Services	Iron Control					
				Listed Below			

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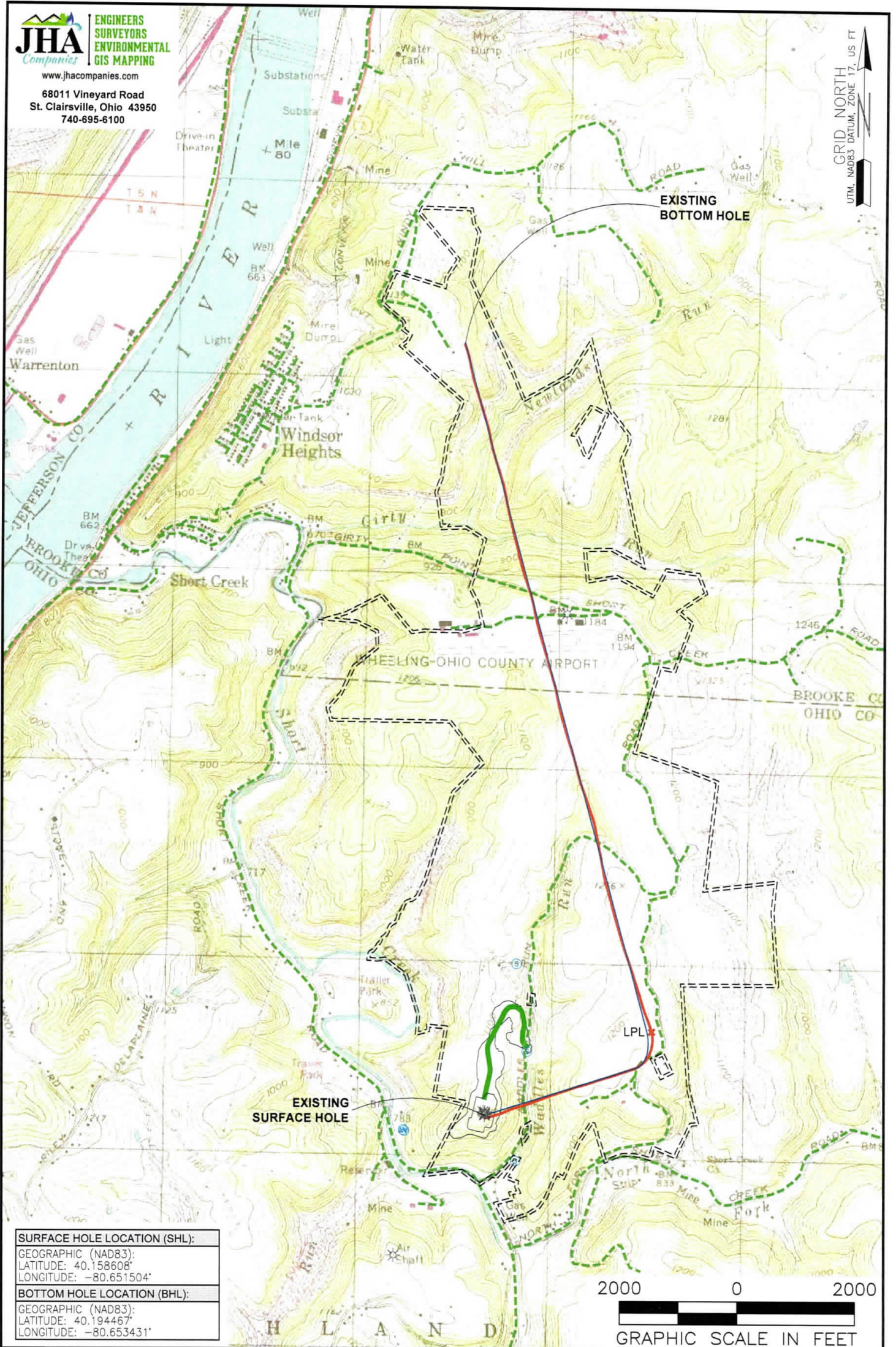


**ENGINEERS
SURVEYORS
ENVIRONMENTAL
GIS MAPPING**

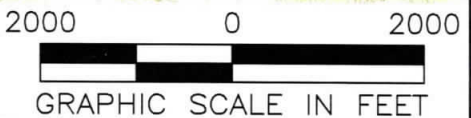
www.jhacompanies.com

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

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



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.158608'
LONGITUDE: -80.651504'
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.194467'
LONGITUDE: -80.653431'



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 x LANDING POINT LOCATION
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH
- FLOOD PLAIN

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: EDWARD DREMAK OHI	WELL # 605H	SERIAL # XXXX
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201, MORGANTOWN, WV 26508	COUNTY : OHIO	CODE: 069	DISTRICT: RICHLAND
SURFACE OWNER: ANDREW JOHN EVICK	USGS 7 1/2 QUADRANGLE MAP NAME: TILTONSVILLE, OH		

(2,000' SCALE) BOTTOM HOLE LATITUDE: 40°12'30"

7893'

(2,000' SCALE) SURFACE HOLE LATITUDE: 40°10'00"

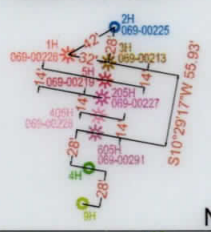
7353'



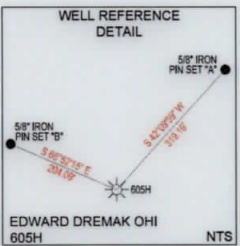
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St. Clairsville, Ohio 43950
740-695-6100

WELL LAYOUT



NTS



NTS

NOTES ON SURVEY

1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

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

2940'

80°37'30"

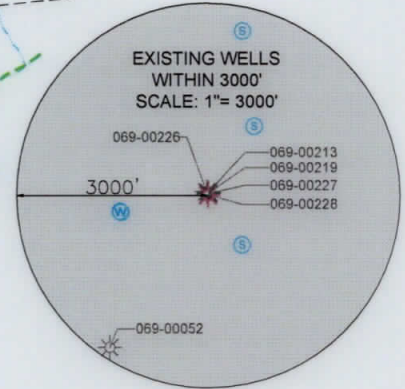
80°37'30"

(2,000' SCALE) SURFACE HOLE LONGITUDE: -80°37'30"

(2,000' SCALE) BOTTOM HOLE LONGITUDE: -80°37'30"

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445419.65 EASTING: 529678.56
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445867.79 EASTING: 530537.88
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4449399.07 EASTING: 529498.99
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445419.65 EASTING: 529678.56
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445877.90 EASTING: 530511.00
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4449404.94 EASTING: 529499.63

LINE	BEARING	DISTANCE
L1	S84°34'17"W	747.59'
L2	N78°49'42"W	761.05'



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
P.S. 2041 *Handwritten signature and date 3/25/19*

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

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	OPERATOR'S WELL #: EDWARD DREMAK OHI 605H
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)	API WELL #: 47 STATE 069 COUNTY 00291 PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1,087.5'

DISTRICT: RICHLAND COUNTY: OHIO QUADRANGLE: TILTONSVILLE, OH

SURFACE OWNER: ANDREW JOHN EVICK ACREAGE: ±34.19

OIL & GAS ROYALTY OWNER: EDWARD W. & JOANNE V. DREMAK ACREAGE: ±34.19

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) **AS-DRILLED**

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,816' TVD 19,174' TMD

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

LEGEND:	REVISIONS:	DATE: 03-28-2019
PROPOSED SURFACE HOLE / BOTTOM HOLE		API NO: 47-069-00291
EXISTING / PRODUCING WELLHEAD	SURVEYED BOUNDARY	DRAWN BY: D. REED
LANDING POINT LOCATION	LEASE BOUNDARY	SCALE: 1" = 3000'
EXISTING WATER WELL	ASDRILLED PATH	DRAWING NO: 2018-284
EXISTING SPRING	PROPOSED PATH	WELL LOCATION PLAT

