

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

API 47 - 069 - 00241 County OHIO District LIBERTY
Quad VALLEY GROVE Pad Name OCC A OHI PAD Field/Pool Name PANHANDLE
Farm name BOARD OF COMMISSIONERS OF OHIO COUNTY Well Number OCC A OHI 205H
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 4,436,650.18 Easting 534,271.78
Landing Point of Curve Northing 4,437,116.85 Easting 534,606.89
Bottom Hole Northing 4,439,346.76 Easting 533,622.59

Elevation (ft) 1095.9 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 10/24/2017 Date drilling commenced 04/04/2018 Date drilling ceased 05/15/2018
Date completion activities began 09/22/2018 Date completion activities ceased 11/08/2018
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

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Freshwater depth(s) ft 432' Open mine(s) (Y/N) depths N WV Department of
Salt water depth(s) ft 586' Void(s) encountered (Y/N) depths N Environmental Protection
Coal depth(s) ft 500' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed

C. Hill 4-3-19

WR-35
Rev. 8/23/13

API 47-069 - 00241 Farm name BOARD OF COMMISSIONERS OF OHIO COUNTY Well number OCC A OHI 205H

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	537'	NEW	J-55/54.50#	422.9'	Y, 24 BBLS
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	1,856'	NEW	J-55/36#		Y, 30 BBLS
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	15,070'	NEW	HCP-110/20#		Y, 15 BBLS
Tubing		2.375	6,988'	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	483	15.60	1.20	579.6	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	704	15.60	1.19	837.76	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2,757	15.60	1.19	3,280.83	SURFACE	24
Tubing							

Drillers TD (ft) 15,070' Loggers TD (ft) 15,070'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5,446'

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 _____

WV Department of Environmental Protection

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

**OCC A OHI 205H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	9/6/2018	14,981	14,885	36
2	9/24/2018	14,852	14,745	42
3	9/24/2018	14,712	14,605	42
4	9/25/2018	14,572	14,462	42
5	9/25/2018	14,432	14,325	42
6	9/26/2018	14,290	14,185	42
7	9/27/2018	14,152	14,045	42
8	9/27/2018	14,012	13,902	42
9	9/28/2018	13,872	13,765	42
10	9/29/2018	13,732	13,625	42
11	9/29/2018	13,592	13,485	42
12	9/30/2018	13,452	13,350	42
13	9/30/2018	13,312	13,205	42
14	10/1/2018	13,168	13,065	42
15	10/2/2018	13,032	12,925	42
16	10/2/2018	12,892	12,785	42
17	10/3/2018	12,752	12,645	42
18	10/4/2018	12,612	12,505	42
19	10/5/2018	12,472	12,365	42
20	10/5/2018	12,332	12,225	42
21	10/6/2018	12,192	12,085	42
22	10/7/2018	12,052	11,945	42
23	10/7/2018	11,912	11,805	42
24	10/8/2018	11,772	11,665	42
25	10/8/2018	11,632	11,525	42
26	10/9/2018	11,492	11,385	42
27	10/9/2018	11,352	11,245	42
28	10/10/2018	11,212	11,105	42
29	10/10/2018	11,072	10,965	42
30	10/11/2018	10,932	10,825	42
31	10/12/2018	10,792	10,685	42
32	10/12/2018	10,652	10,545	42
33	10/13/2018	10,512	10,405	42
34	10/13/2018	10,372	10,265	42
35	10/14/2018	10,232	10,125	42
36	10/14/2018	10,092	9,985	42
37	10/15/2018	9,952	9,845	42
38	10/15/2018	9,812	9,705	42
39	10/21/2018	9,672	9,568	42
40	10/21/2018	9,532	9,425	42
41	10/22/2018	9,387	9,285	42
42	10/22/2018	9,252	9,145	42

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Environmental Protection

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PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
43	10/22/2018	9,112	9,007	42
44	10/23/2018	8,972	8,865	42
45	10/23/2018	8,836	8,725	42
46	10/23/2018	8,692	8,585	42
47	10/24/2018	8,552	8,445	42
48	10/24/2018	8,412	8,305	42
49	10/25/2018	8,272	8,165	42
50	10/26/2018	8,132	8,025	42
51	10/26/2018	7,992	7,885	42
52	10/26/2018	7,852	7,745	42
53	10/27/2018	7,712	7,605	42
54	10/27/2018	7,572	7,465	42
55	10/27/2018	7,432	7,325	42
56	10/28/2018	7,292	7,185	42
57	10/28/2018	7,154	7,045	42
58	10/28/2018	7,012	6,905	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	9/23/2018	71	7,840	7,056	4,349	280,188	6,722	0
2	9/24/2018	89	7,950	4,842	4,814	288,180	4,932	0
3	9/25/2018	94	8,150	6,455	4,814	271,774	4,540	0
4	9/25/2018	94	8,350	6,954	5,080	288,980	4,466	0
5	9/26/2018	94	8,350	8,125	5,266	282,195	4,972	0
6	9/26/2018	96	8,125	8,360	4,520	278,880	4,725	0
7	9/27/2018	91	8,050	8,550	4,385	289,710	5,030	0
8	9/29/2018	89	8,477	5,333	4,711	280,086	4,103	0
9	9/28/2018	96	8,253	5,335	4,610	279,600	4,022	0
10	9/29/2018	91	7,986	5,960	4,516	275,892	4,288	0
11	9/30/2018	96	8,350	6,431	4,438	275,678	3,824	0
12	9/30/2018	98	8,325	6,046	4,718	288,936	3,771	0
13	10/1/2018	98	8,360	5,810	4,347	279,890	3,752	0
14	10/2/2018	98	8,647	4,657	4,352	281,710	3,732	0
15	10/2/2018	96	7,927	5,416	4,627	272,680	4,601	0
16	10/3/2018	87	7,916	4,867	4,656	286,340	4,863	0
17	10/4/2018	91	7,545	6,015	4,325	270,840	3,857	0
18	10/5/2018	89	7,456	6,124	4,375	275,260	4,460	0
19	10/5/2018	92	7,215	5,635	4,589	290,240	4,228	0
20	10/6/2018	93	7,889	5,546	4,825	285,740	5,079	0
21	10/7/2018	100	7,645	5,231	4,825	279,760	4,792	0
22	10/7/2018	92	7,452	6,176	4,652	283,560	4,451	0
23	10/8/2018	89	7,882	5,812	4,568	279,660	3,732	0
24	10/8/2018	99	7,743	5,560	5,277	281,820	4,358	0
25	10/9/2018	98	7,689	5,314	5,407	280,860	5,214	0
26	10/9/2018	99	7,591	5,523	4,987	281,640	4,655	0
27	10/10/2018	96	7,615	5,888	4,536	281,900	4,267	0
28	10/10/2018	99	7,789	6,018	4,844	274,020	4,187	0
29	10/10/2018	97	7,423	5,455	4,852	289,320	3,875	0
30	10/12/2018	100	7,712	5,481	5,161	286,680	3,401	0
31	10/12/2018	99	7,402	5,921	5,127	295,640	4,149	0
32	10/13/2018	97	7,394	4,857	4,428	290,260	3,738	0
33	10/13/2018	97	7,545	4,863	4,822	289,160	3,668	0
34	10/14/2018	99	7,689	6,162	4,852	282,480	4,272	0
35	10/14/2018	99	7,752	5,337	5,203	279,900	3,000	0
36	10/15/2018	99	7,834	6,618	4,752	292,280	2,848	0
37	10/15/2018	95	7,436	5,364	4,952	275,080	3,516	0
38 (Abandoned)	10/15/2018	0	0	0	0	0	216	0
39	10/20/2018	97	7,962	5,534	4,558	272,480	3,822	0
40	10/22/2018	99	7,327	4,852	4,449	262,860	3,402	0
41	10/22/2018	99	7,652	6,127	4,686	273,680	3,427	0
42	10/22/2018	99	7,577	5,526	4,457	280,460	3,396	0
43	10/22/2018	99	7,637	4,769	5,077	283,870	3,553	0
44	10/23/2018	98	8,432	5,701	4,987	268,710	3,222	0
45	10/23/2018	98	8,749	4,579	5,235	273,760	3,292	0
46	10/23/2018	98	7,887	4,257	5,434	265,350	3,298	0
47	10/24/2018	96	7,750	6,051	4,821	270,810	3,322	0
48	10/25/2018	95	7,750	4,914	4,548	287,340	3,276	0
49	10/25/2018	98	7,550	5,505	4,618	268,320	3,039	0
50	10/26/2018	97	7,475	5,871	4,681	281,880	3,082	0
51	10/26/2018	99	7,650	5,430	4,879	281,000	3,137	0
52	10/27/2018	95	7,600	5,235	5,035	285,780	2,892	0
53	10/27/2018	98	7,450	5,242	5,087	285,660	2,888	0

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 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/other
54	10/27/2018	97	7,205	5,865	5,024	291,990	2,829	0
55	10/27/2018	97	7,250	6,091	5,249	278,080	2,735	0
56	10/28/2018	97	7,125	6,100	4,944	284,060	2,874	0
57	10/28/2018	98	7,200	5,562	5,127	282,930	2,803	0
58	10/29/2018	99	6,950	5,954	4,964	280,760	2,927	0

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Attachment 3

47069002410000

OCC A OHI 205H

Well Name:

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	432.00	432.00	
Top of Salt Water	586.00	586.00	NA	NA	
Pittsburgh Coal	500.00	500.00	608.00	608.00	
Pottsville (ss)	608.00	608.00	928.00	928.00	
Raven Cliff (ss)	928.00	928.00	1342.00	1342.00	
Maxton (ss)	1342.00	1342.00	1649.00	1644.00	
Big Injun (ss)	1649.00	1644.00	2167.00	2161.00	
Berea (siltstone)	2167.00	2161.00	5730.00	5619.00	
Rhinestreet (shale)	5864.00	5636.00	6177.00	5904.00	
Cashaqua (shale)	6177.00	5904.00	6260.00	5967.00	
Middlesex (shale)	6260.00	5967.00	6372.00	6043.00	
Burket (shale)	6372.00	6043.00	6404.00	6063.00	
Tully (ls)	6404.00	6063.00	6469.00	6100.00	
Mahantango (shale)	6469.00	6100.00	6805.00	6226.00	
Marcellus (shale)	6805.00	6226.00	NA	NA	GAS

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/23/2018
Job End Date:	10/29/2018
State:	West Virginia
County:	Ohio
API Number:	47-069-00241-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	OCC A OHI 205
Latitude:	40.07942560
Longitude:	-80.59803651
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,206
Total Base Water Volume (gal):	9,123,852
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-C1200	SWN Well Services	Corrosion Inhibitor					
FLOJET DR 9000LPP	SWN Well Services	Friction Reducer		Listed Below			
				Listed Below			

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	Methanol	67-56-1	60.00000	0.01618
	Ethylene glycol	107-21-1	10.00000	0.01136
	Benzyl-(C12-C16 Alky)- Dimethyl-Ammonium	68424-85-1	30.00000	0.00809
	Acetic Acid	64-19-7	37.50000	0.00331
	Chloride Glutaraldehyde	111-30-8	10.00000	0.00270
	Methanol	67-56-1	80.00000	0.00203
	Citric Acid	77-92-9	22.50000	0.00199
	Alcohols, C12- C16, Ethoxylated propoxylated	68213-24-1	2.00000	0.00191
	Fatty alcohols ethoxylated	Proprietary	2.00000	0.00191
	Amine Triphosphate	Proprietary	30.00000	0.00180
	Oxyalkylated fatty acid	68951-67-7	9.67400	0.00025
	Fatty acids	61790-12-3	5.02700	0.00013
	Modified thiourea polymer	68527-49-1	4.74600	0.00012
	Potassium acetate	127-08-2	0.02200	0.00000
	Formaldehyde	50-00-0	0.00400	0.00000

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

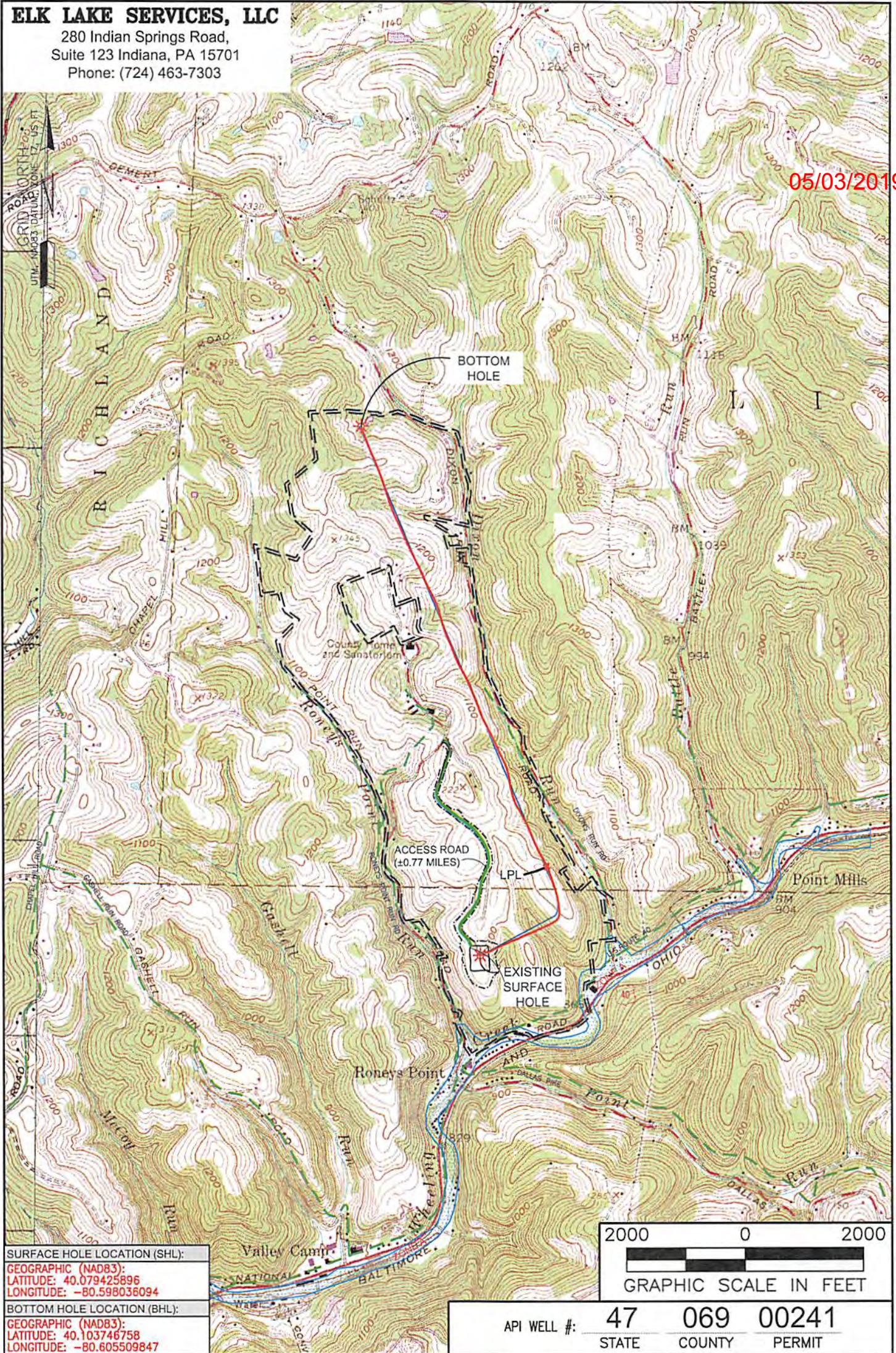
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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Environmental Protection

ELK LAKE SERVICES, LLC

280 Indian Springs Road,
Suite 123 Indiana, PA 15701
Phone: (724) 463-7303

05/03/2019



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.079425896
LONGITUDE: -80.598036094
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.103746758
LONGITUDE: -80.605509847

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.

WELL OPERATOR:
 SWN PRODUCTION COMPANY, LLC
ADDRESS:
 1300 FORT PIERPONT DR STE 201, MORGANTOWN, WV 26508
SURFACE OWNER:
 BOARD OF COMMISSIONERS OF OHIO COUNTY

API WELL #:	47	069	00241
	STATE	COUNTY	PERMIT

LEGEND:	ACCESS ROAD
PROPOSED SURFACE HOLE / BOTTOM HOLE	PUBLIC ROAD
EXISTING / PRODUCING WELLHEAD	ACCESS ROAD TO PREV. SITE
LPL * LANDING POINT LOCATION	LEASE BOUNDARY
FLOOD PLAIN	EXISTING PATH
	PROPOSED PATH

WELL (FARM) NAME:	WELL #	SERIAL #
OCC A OHI	205H	XXXX
COUNTY	DISTRICT:	
OHIO COUNTY - 69	LIBERTY	
USGS 7 1/2 QUADRANGLE MAP NAME		
VALLEY GROVE, WV		

ELK LAKE SERVICES, LLC

280 Indian Springs Road,
Suite 123 Indiana, PA 15701
Phone: (724) 463-7303

SURFACE HOLE LOCATION (SHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,436,650.18
EASTING: 534,271.78

LANDING POINT (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,437,116.85
EASTING: 534,606.89

BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,346.76
EASTING: 533,622.59

SURFACE HOLE LOCATION (SHL):

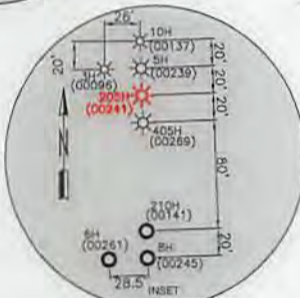
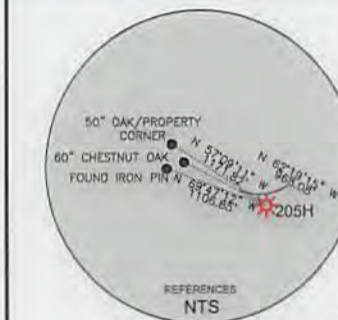
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,436,650.15
EASTING: 534,271.74

LANDING POINT (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,437,044.11
EASTING: 534,632.26

BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,439,347.94
EASTING: 533,614.44



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.
- WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 531 FEET OF PROPOSED WELL.
- PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS ARE WITHIN THE LIMITS OF DISTURBANCE.
- 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 INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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. 2164



(+) 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)

COMPANY: **SWN** Production Company, LLC

OCC A OHI
OPERATOR'S WELL #: 205H
API WELL #: 47 STATE 069 COUNTY 00241 PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW
 WATERSHED: UPPER OHIO SOUTH
 DISTRICT: LIBERTY COUNTY: OHIO COUNTY
 SURFACE OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY
 OIL & GAS ROYALTY OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY
 DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED
 TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,241' TVD 15,070' TMD

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

LEGEND:
 ○ PROPOSED SURFACE HOLE / BOTTOM HOLE
 * EXISTING / PRODUCING WELLHEAD
 LPL * LANDING POINT LOCATION
 * EXISTING WATER WELL
 * EXISTING SPRING
 — SURVEYED BOUNDARY
 — DRILLING UNIT
 = = = = LEASE BOUNDARY
 — EXISTING PATH
 — PROPOSED PATH
 REVISIONS:
 DATE: 01-22-2019
 FILE NO: 16-78
 DRAWN BY: JMB
 SCALE: 1" = 2000'
 DRAWING NO: 1
 WELL LOCATION PLAT 1

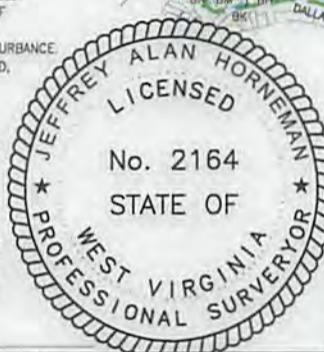
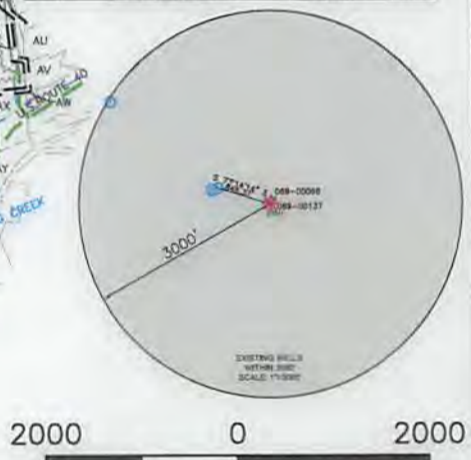
Latitude: 40°05'00" SURFACE HOLE 4114'

Latitude: 40°07'30"

BOTTOM HOLE 6203'

TRACT	SURFACE OWNER / ROYALTY OWNER	TAX PARCEL	ACRES
1	BOARD OF COMMISSIONERS OF OHIO COUNTY (S/R)	3-113-3	262.850
TRACT SURFACE OWNER TAX PARCEL ACRES			
2	BOARD OF COMMISSIONERS OF OHIO COUNTY	3-113-3-1	227.648
3	THOMAS R. AND SUE D. JARABAK HIS WIFE	3-110-25	98.6780
4	JEAN P. AND L.P. (S/SH)	3-110-27	50.885
5	CURTIS R. AND CAROLINE B. (S/SH) HUSBAND & WIFE	3-110-27-3	25.000
6	CAROLINE LOUISIANA (S/SH)	3-110-27-1	10.000

TRACT	TERRACE OWNER	TAX PARCEL	ACRES
A	TIMMY R. & AMY LYNN MINCH	6-13-5	161.800
B	CARL J. SHELLER	3-113-24	2.198
C	TIMMY R. & AMY LYNN MINCH	3-113-2	20.203
D	NATHAN CHARLES GORDON	3-113-2-1	1.245
E	JEFFREY R. BENNETT	3-113-2-2	1.568
F	PHILIP D. & ANNA C. MAXWELL	3-113-3	206.000
G	PHILIP D. & ANNA C. MAXWELL	3-113-1-2	25.698
H	OHIO COUNTY COMMISSION (CEMETERY)	3-110-23-3	8.000
I	BOBBIET & BRIDGET WEIR	3-110-23-1	5.580
J	ROBERT R. LUCHETTI	3-110-23	162.724
K	GLEN L. & R. S. WALTERS	3-110-28	39.880
L	J. A. & D. A. KOCHY	3-110-29	30.000
M	MICHAEL A. KUTNY & K. A. PARSONS	3-110-35-1	33.7511
N	MICHAEL A. KUTNY & K. A. PARSONS	3-110-35-2	0.135
O	BRUCE A. & BRENDA J. PARSONS	3-110-35	54.258
P	CHARLES & FLORA DICHRON	3-110-36	2.850
Q	HARRY F., JR. & K. A. METZ	3-110-48	2.850
R	JOYCE E. KEMPEL	3-110-48	2.850
S	CLARENCE A. & MILDRED L. WOOD	3-110-36-7	2.081
T	MICHELLE L. HORBATK	3-110-36-7	0.010
U	MICHELLE L. HORBATK	3-110-36-1	2.218
V	DAVID A. & FLORENCE D. BLOWERS	3-110-36-6	20.040
W	WALTER D. & D. A. BARTOLDVICH	3-110-26-2	12.130
X	ERIC M. & JODY L. WADE	3-110-26-6	5.320
Y	HERMAN & MARTHA K. KRUPINSKI	3-110-26-5	1.162
Z	EMILY E. SCHULTZ	3-110-26-4	1.135
AA	MICHAEL A. KUTNY & E. WALL	3-110-35-3	0.922
AB	DAVID H. & DOROTHY L. NEWLAND	3-110-28-1	1.000
AC	LANCE H., JR. & SHERRAN C. MILLER	3-110-38	19.990
AD	RONALD W. HOULCHINS	3-113-36-3	20.000
AE	RONALD W. HOULCHINS	3-113-4-3	15.053
AF	RICHARD CLARK STEELE JR. & ALEXANDRA MELBA PUGSARICH	3-113-4	1.058
AG	JOANN VANDERGRIFT	3-113-4-2	1.074
AH	JOANN VANDERGRIFT	3-113-4-1	1.485
AI	DAVID W. STEVENSON ETAL	3-113-9	1.360
AJ	JAMES ALAN STEVENSON	3-113-9-4	4.777
AK	KIMBERLY STEVENSON	3-113-9-1	0.804
AL	TYSON L. LOWBERGE	3-113-9	0.546
AM	TYSON L. LOWBERGE	3-113-14-4	0.215
AN	JAMES L. III & CHRISTINE WHEELER	3-113-12-3	0.298
AO	JOLLY W. WHEELER	3-113-12-2	0.968
AP	STEVEN SHEARER	3-113-12-1	0.824
AQ	JAMES C. & D. L. KNIGHT	3-113-13	5.000
AR	GARY L. & MARY C. DEMERSKI	3-113-14	0.581
AS	KATH E. & C. J. BARON	3-113-15	0.383
AT	HARRY E. & CHERYL L. HOLMAN	6-13-11	1.140
AU	HARRY E. & CHERYL L. HOLMAN	6-13-13	3.580
AV	GERALD T. & ANN MOORE	6-13-14	2.480
AW	GERALD T. & ANN MOORE	6-13-14-1	5.242
AX	OHIO COUNTY COMMISSION	6-13-28	5.168
AY	JES INVESTMENTS LLC	6-13-18	3.038
AZ	WELDY GARRISON	6-13-33	23.500
BA	JANE K. KUHENS	6-13-54	0.304
BB	SUPERIOR INDUSTRIAL LAUNDRIES	6-130-38	1.080
BC	PAULA C. & DRON E. STEPHAN	6-130-25	0.306
BD	HAROLD B. & D. J. MOORE	6-130-24	0.380
BE	ROBERT B. & LYON M. CLARK	6-130-33	0.200
BF	MARVIN H. & A. L. SWAN	6-130-22	0.202
BG	PHIL LLC	6-130-21	0.450
BH	TAMMY M. HAMMONS	6-130-20	0.360
BI	EDDIE L. & TRACEY L. MCDANIELS	6-130-19	0.720
BJ	JUSTIN S. MARSH & ASHLEY L. FONNER	6-130-18-1	0.260
BK	HOLLY M. FLACK	6-130-18	0.223
BL	JOSEPH A. MCKENNER, II	6-130-17	0.550
BM	VALLEY COIN MACHINE COMPANY, LLC	6-130-16	1.113
BN	BOARD OF COMMISSIONERS OF OHIO COUNTY	6-130-13	0.1128
BO	KENNETH L. NELSON	6-130-10	0.246
BP	JOHN A. AND C. M. HUNTER	6-130-11-1	0.920
BQ	JOHN A. AND C. M. HUNTER	6-130-11	0.695
BR	JOHN A. AND C. M. HUNTER	6-130-12	0.333
BS	RANDY & BRENDA HANING	6-13-5-2	4.548
BT	RANDY DALE & BRENDA JOYCE HANING	6-13-5-1	0.217
BU	BOARD OF COMMISSIONERS OF OHIO COUNTY	6-13-10	1.800
BV	BARBARA A. SHORES	6-13-9	1.100
BW	JAMES B. AND DARLA J. HUGHES	6-13-8	0.340
BX	TRACY E. & JOHN F. KETRON	6-13-7	0.230
BY	ALFRED DEER	6-13-6	1.100
BZ	VILLAGE OF VALLEY GROVE	6-130-27	0.030



05/03/2019

Longitude: 80°35'00" SURFACE HOLE 1426'
 Longitude: 80°35'00" SURFACE HOLE 7743'

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

WELL TYPE: OIL LIQUID INJECTION DEEP PRODUCTION WASTE DISPOSAL
 WATERSHED: UPPER OHIO SOUTH
 DISTRICT: LIBERTY
 COUNTY: OHIO COUNTY
 SURFACE OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY
 OIL & GAS ROYALTY OWNER: BOARD OF COMMISSIONERS OF OHIO COUNTY
 ACRES: ±262.850
 QUADRANGLE: VALLEY GROVE
 ELEVATION: 1025.9'
 TARGET FORMATION: MARCELLUS
 ESTIMATED DEPTH: 6241' TVD 12070' TMD
 CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED PERFORATE NEW FORMATION
 DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

API WELL #: 47
 STATE: OHIO
 COUNTY: PERMIT
 OPERATOR'S WELL #: 069 00241
 ACCURACY: 1/500
 PROVEN SURVEY SOURCE OF GRADE GPS
 ELEVATION: (NAVD 88, US FT)
 UNITED STATES TOPOGRAPHIC MAPS (+) DENOTES LOCATION OF WELL ON
 WDEP
 OFFICE OF OIL & GAS
 601 27TH STREET
 CHARLESTON, WV 25034

WELL RESTRICTIONS
 1. NO OCCUPIED DWELLINGS > 2500 SQ FT WITHIN 625 FEET OF CENTER OF PAD.
 2. NO AGRICULTURE BUILDINGS > 2500 SQ FT WITHIN 625 FEET OF CENTER OF PAD.
 3. WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 251 FEET OF PROPOSED WELL.
 4. PERMANENT STREAMS, LAKES, PONDS, OR RESERVOIRS ARE WITHIN THE LIMITS OF DISTURBANCE.
 5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
 6. NO GROUND TAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD.
 LIMITS OF DISTURBANCE E & S CONTROLS OR PUBLIC WATER SUPPLY.

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 WESTERS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.
 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.

STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 No. 2184
 LICENSED
 JEFFREY ALAN HORNEMAN

LEGEND:
 EXISTING SPRING
 EXISTING WATER WELL
 L.P.L. LANDING POINT LOCATION
 EXISTING \ PRODUCING WELLS
 PROPOSED SURFACE HOLE \ BOTTOM HOLE
 SURVEYED BOUNDARY
 DRILLING UNIT
 LEASE BOUNDARY
 EXISTING PATH
 PROPOSED PATH

GRAPHIC SCALE IN FEET
 0 2000 3000

WELL BORE TABLE FOR SURFACE ROYALTY OWNERS
 TRACT 1 SURFACE OWNER ROYALTY OWNER BOARD OF COMMISSIONERS OF OHIO COUNTY TAX PARCEL ADDRESS 1-12-2 022 850 (S)\

WELL BORE TABLE FOR SURFACE ROYALTY OWNERS
 TRACT 2 SURFACE OWNER ROYALTY OWNER BOARD OF COMMISSIONERS OF OHIO COUNTY TAX PARCEL ADDRESS 2-12-2-2 027 848

WELL BORE TABLE FOR SURFACE ROYALTY OWNERS
 TRACT 3 SURFACE OWNER ROYALTY OWNER BOARD OF COMMISSIONERS OF OHIO COUNTY TAX PARCEL ADDRESS 3-12-2-2 027 848

WELL BORE TABLE FOR SURFACE ROYALTY OWNERS
 TRACT 4 SURFACE OWNER ROYALTY OWNER BOARD OF COMMISSIONERS OF OHIO COUNTY TAX PARCEL ADDRESS 4-12-2-2 027 848

WELL BORE TABLE FOR SURFACE ROYALTY OWNERS
 TRACT 5 SURFACE OWNER ROYALTY OWNER BOARD OF COMMISSIONERS OF OHIO COUNTY TAX PARCEL ADDRESS 5-12-2-2 027 848

