

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

API 47-069-00259 County OHIO District TRIADELPHIA
Quad WHEELING Pad Name MELVIN KAHLE OHI PAD 1 Field/Pool Name PANHANDLE
Farm name MELVIN W AND CAROL M KAHLE Well Number MELVIN KAHLE OHI 206H
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 4,435,790.02 Easting 531,957.94
Landing Point of Curve Northing 4,435,294.67 Easting 531,646.96
Bottom Hole Northing 4,434,162.63 Easting 532,015.72

Elevation (ft) 1276.3 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 12/11/2017 Date drilling commenced 12/21/2017 Date drilling ceased 03/01/2018
Date completion activities began 05/01/2018 Date completion activities ceased 06/02/2018
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 369' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 766' Void(s) encountered (Y/N) depths 607' - 620'
Coal depth(s) ft 604' Cavern(s) encountered (Y/N) depths N

Is coal being mined in area (Y/N) N

Reviewed
C. J. O. 10.9.18

Reviewed by:
SB 10.9.18

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of
Environmental Protection

API 47-069 - 00259 Farm name MELVIN W AND CAROL M KAHLE Well number MELVIN KAHLE OHI 206H

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	685'	NEW	J-55/54.50#	592'; 618'	Y
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2,048'	NEW	J-55/36#		Y, 9 bbls
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	11,215'	NEW	HCP-110/20#		Y
Tubing		2.375	7,208'	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	627	15.60	1.20	752.4	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	796	15.60	1.19	947.24	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	1,960	15.60	1.19	2,332.4	SURFACE	24
Tubing							

Drillers TD (ft) 11,215' Loggers TD (ft) 11,215'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 5,915'

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 _____

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of Environmental Protection

API 47- 069 - 00259 Farm name MELVIN W AND CAROL M KAHLE Well number MELVIN KAHLE OHI 206H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>6,307'</u> TVD	<u>6,969'</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2126 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 4001 mcfpd Oil 384 bpd NGL _____ bpd Water 190 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	
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

Please insert additional pages as applicable.

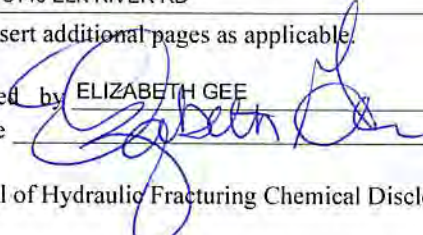
Drilling Contractor SWN DRILLING COMPANY
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Logging Company WEATHERFORD
Address 111 N RIVER AVE City WESTON State WV Zip 26452

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

Stimulating Company HALLIBURTON ENERGY SERVICES
Address 5146 ELK RIVER RD City BLUE CREEK State WV Zip 25026

Please insert additional pages as applicable.

Completed by ELIZABETH GEE Telephone 832-796-7632
Signature  Title STAFF REGULATORY ANALYST Date 08/29/2018

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of Environmental Protection

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

MELVIN KAHLE OHI 206H

ATTACHMENT 1

PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	4/25/2018	11,128	11,036	36
2	5/2/2018	11,002	10,898	42
3	5/14/2018	10,866	10,762	42
4	5/16/2018	10,730	10,626	42
5	5/16/2018	10,594	10,490	42
6	5/17/2018	10,458	10,354	42
7	5/17/2018	10,322	10,218	42
8	5/18/2018	10,186	10,082	42
9	5/18/2018	10,050	9,946	42
10	5/18/2018	9,914	9,810	42
11	5/19/2018	9,778	9,674	42
12	5/19/2018	9,642	9,538	42
13	5/19/2018	9,506	9,402	42
14	5/19/2018	9,370	9,266	42
15	5/20/2018	9,234	9,130	42
16	5/20/2018	9,098	8,994	42
17	5/21/2018	8,962	8,858	42
18	5/21/2018	8,826	8,722	42
19	5/21/2018	8,690	8,586	42
20	5/21/2018	8,554	8,450	42
21	5/22/2018	8,418	8,315	42
22	5/22/2018	8,282	8,175	42
23	5/22/2018	8,146	8,042	42
24	5/23/2018	8,013	7,906	42
25	5/23/2018	7,874	7,770	42
26	5/23/2018	7,738	7,634	42
27	5/24/2018	7,602	7,498	42
28	5/24/2018	7,466	7,361	42
29	5/25/2018	7,318	7,226	42
30	5/25/2018	7,192	7,090	42

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of
Environmental Protection

MELVIN KAHLE OHI 206H

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	5/2/2018	61.8	7,997	8,513	3,606	287,060	7,136	0
2	5/14/2018	99.5	5,933	4,296	4,242	273,520	4,575	0
3	5/15/2018	100.7	7,314	5,334	4,327	277,420	4,832	0
4	5/16/2018	101	7,672	5,522	4,208	270,640	4,889	0
5	5/17/2018	99	7,194	5,599	4,349	285,990	4,802	0
6	5/17/2018	100.3	7,066	5,109	4,196	282,860	4,412	0
7	5/17/2018	99.4	7,891	5,662	4,165	275,220	4,740	0
8	5/18/2018	97.6	7,371	5,110	4,392	276,780	4,009	0
9	5/18/2018	95.6	7,269	3,826	4,282	270,620	4,599	0
10	5/18/2018	101	7,427	5,537	4,447	282,280	4,400	0
11	5/19/2018	98	6,860	5,439	4,544	276,880	4,210	0
12	5/19/2018	94.6	7,204	5,022	4,060	275,680	3,445	0
13	5/19/2018	99.9	6,905	5,590	4,331	276,060	4,194	0
14	5/20/2018	100.2	6,875	5,523	4,184	274,540	4,035	0
15	5/20/2018	98.4	6,779	5,436	4,484	275,345	4,152	0
16	5/20/2018	99.9	7,114	5,313	4,711	280,200	4,128	0
17	5/21/2018	98.6	6,851	5,341	4,563	278,000	3,627	0
18	5/21/2018	98.8	6,803	5,527	4,121	273,800	3,884	0
19	5/21/2018	96.9	6,732	5,225	4,299	283,260	3,879	0
20	5/22/2018	100.5	6,916	5,477	4,404	273,360	3,551	0
21	5/22/2018	100.2	6,783	5,384	4,272	273,300	4,104	0
22	5/22/2018	100	6,769	5,287	4,403	295,290	4,158	0
23	5/23/2018	100.5	6,481	4,312	4,359	273,660	3,669	0
24	5/23/2018	100.5	7,150	5,528	4,414	272,820	4,081	0
25	5/23/2018	99.6	7,449	5,073	4,127	278,740	3,793	0
26	5/24/2018	100	7,051	5,442	4,231	278,660	3,935	0
27	5/24/2018	100.1	7,055	5,512	4,403	272,940	4,068	0
28	5/25/2018	100.2	6,820	5,164	4,251	295,010	4,096	0
29	5/25/2018	100.7	7,159	5,273	4,178	290,060	4,094	0
30	5/26/2018	97.9	6,940	5,491	4,185	282,150	3,600	0

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of
Environmental Protection



Well Name:

Melvin Kahle OHI 206H

47069002590000

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	369.00	369.00	
Top of Salt Water	766.00	766.00	NA	NA	
Pittsburgh Coal	604.00	604.00	617.00	617.00	
Pottsville (ss)	750.00	750.00	803.00	803.00	
Mauch Chunk (shale)	803.00	803.00	1569.00	1569.00	
Raven Cliff (ss)	1053.00	1053.00	1271.00	1271.00	
Maxton (ss)	1481.00	1481.00	1569.00	1569.00	
Greenbriar (ls)	1569.00	1569.00	1768.00	1768.00	
Big Injun (ss)	1768.00	1763.00	1945.00	1938.00	
Berea (siltstone)	2211.00	2201.00	2220.00	2218.00	
Rhinestreet (shale)	5714.00	5710.00	5987.00	5975.00	
Cashaqua (shale)	5987.00	5975.00	6082.00	6002.00	
Middlesex (shale)	6082.00	6002.00	6522.00	6126.00	
Burket (shale)	6522.00	6126.00	6549.00	6143.00	
Tully (ls)	6549.00	6143.00	6624.00	6188.00	
Mahantango (shale)	6624.00	6188.00	6969.00	6307.00	
Marcellus (shale)	6969.00	6307.00	NA	NA	GAS

RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/2/2018
Job End Date:	5/26/2018
State:	West Virginia
County:	Ohio
API Number:	47-069-00259-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Melvin Kahle 206H
Latitude:	40.07176700
Longitude:	-80.62521500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,346
Total Base Water Volume (gal):	5,265,795
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	83.60221	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.53275	

RECEIVED
 Office of Oil and Gas
 WV Department of
 Environmental Protection
 AUG 30 2018

HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
BIOC11219A	NALCO	Biocide					
				Listed Below			
SCAL16486A	NALCO	Scale Inhibitor					
				Listed Below			
LP-65 MC	Halliburton	Scale Inhibitor					
				Listed Below			
FDP-S1016-11	Halliburton	Friction Reducer					
				Listed Below			
NRB	MultiChem	Biocide					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			

RECEIVED
 Office of Oil and Gas
 AUG 30 2018
 WV Department of Environmental Protection

SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				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	15.81549	
			Hydrochloric acid	7647-01-0	60.00000	0.29918	
			Polyacrylate	Proprietary	30.00000	0.01690	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.01690	
			Amine Triphosphate	Proprietary	30.00000	0.00524	
			Ethylene Glycol	107-21-1	30.00000	0.00524	
			Alcohols, C12-16, ethoxylated	68551-12-2	5.00000	0.00282	
			Salts	Proprietary	5.00000	0.00282	
			Amide	Proprietary	5.00000	0.00282	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			sodium nitrate	7631-99-4	60.00000	0.00119	
			Non-hazardous food substance	Proprietary	100.00000	0.00095	
			Inorganic salt	Proprietary	1.00000	0.00056	
			Fatty acid ester	Proprietary	1.00000	0.00056	
			Organic phosphonate	Proprietary	60.00000	0.00031	
			Ammonium chloride	12125-02-9	30.00000	0.00016	
			Diammonium phosphate	7783-28-0	5.00000	0.00003	
			Methanol	67-56-1			
			Benzyl-(C12-C16 Alkyl)- Dimethyl-Ammonium Chloride	68424-85-1			
			Glutaraldehyde	111-30-8			

RECEIVED
 Office of Oil and Gas
 AUG 30 2018
 WV Department of
 Environmental Protection

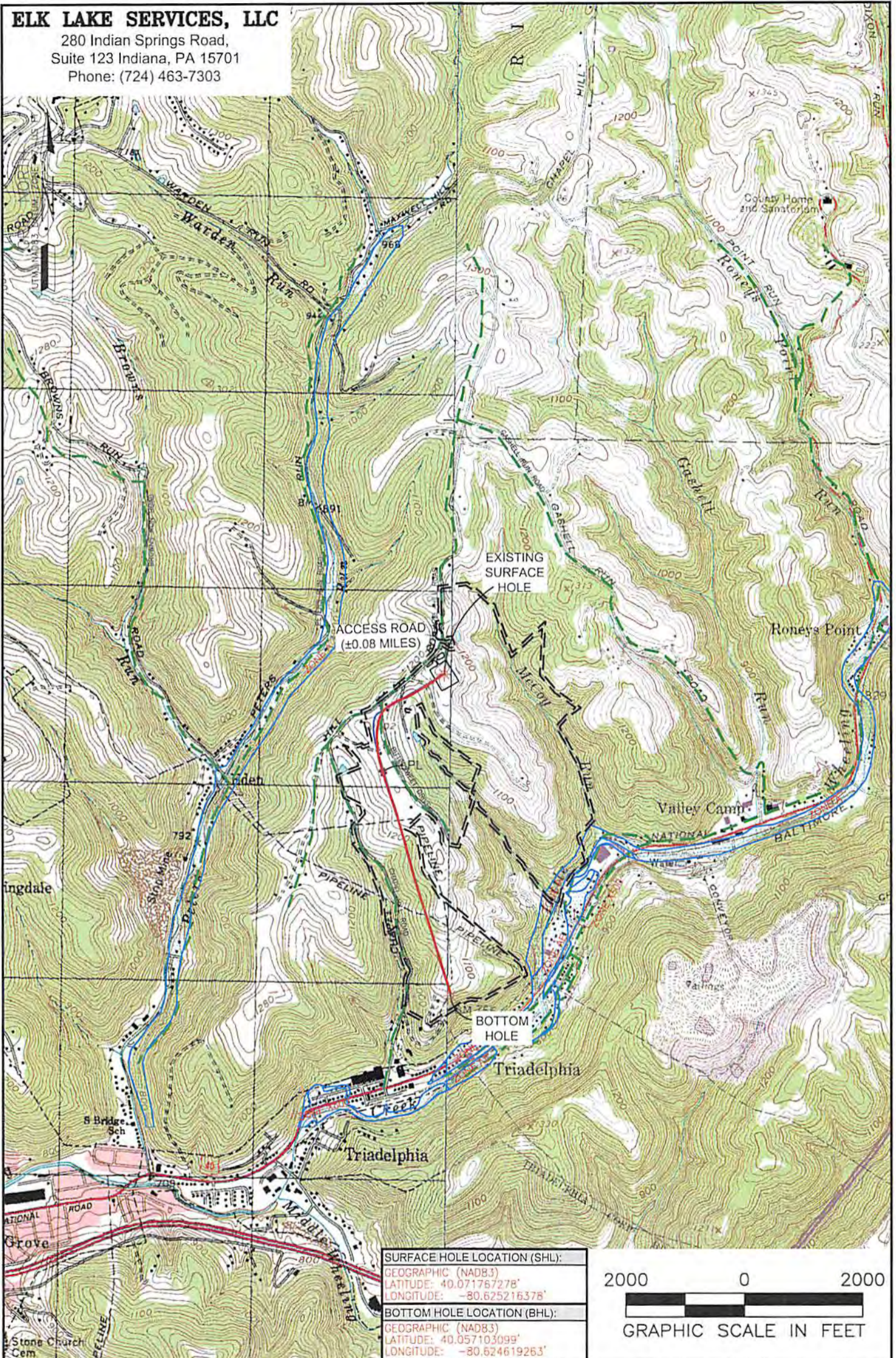
- * Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
- ** Information is based on the maximum potential for concentration and thus the total may be over 100%
- *** If you are calculating a percentage of total ingredients do not add 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)

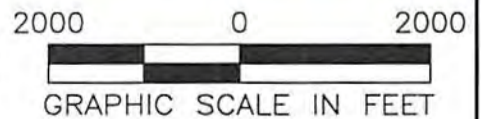
RECEIVED
Office of Oil and Gas
AUG 30 2018
WV Department of
Environmental Protection

ELK LAKE SERVICES, LLC

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



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83)
LATITUDE: 40.071767278°
LONGITUDE: -80.625216378°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83)
LATITUDE: 40.057103099°
LONGITUDE: -80.624619263°



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
- EXISTING PATH
- PROPOSED PATH

WELL OPERATOR:
SWN PRODUCTION COMPANY, LLC

ADDRESS:
P.O. BOX 1300 JANE LEW, WV 26378

SURFACE OWNER:
MELVIN W. AND CAROL M. KAHLE

WELL (FARM) NAME: MELVIN KAHLE OHI	WELL # 206H	SERIAL # XXXX
COUNTY OHIO COUNTY - 69	DISTRICT: TRIADELPHIA	
USGS 7 1/2 QUADRANGLE MAP NAME WHEELING, WV & 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: 4,435,790.02
EASTING: 531,957.94

LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,435,294.67
EASTING: 531,646.96

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,434,162.63
EASTING: 532,015.72

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

TRACT	SURFACE OWNER(S) / ROYALTY OWNER(S)	TAX PARCEL	ACRES
1	MELVIN W. KAHLE, JR AND CAROL M. KAHLE (S/R)	6-17-170	84.99
	SURFACE OWNER	TAX PARCEL	ACRES
2	THOMAS O. DICKEY, JR. SUE ELLEN BAILES; DAVID A. DICKEY	6-17-171	99.95
3	ROBERT T. SELAK AND TAMMY L. SELAK	6-17-172.13	1.078
4	BRIAN W. VOSSEN AND TAMARA K. VOSSEN	6-17-172.1	33.8
5	LOUIS C. BRINKMEIER JR. AND J.A. BRINKMEIER	6-17-175	45.238
6	LOUIS BRINKMEIER, JR.	6-17-175.1	11.013
7	ABUNDANT LIFE BAPTIST CHURCH	6-17-172.14	22.245
8	ABUNDANT LIFE BAPTIST CHURCH	6-17-172.12	19.195
9	DAVID A. DICKEY AND MARGARET GRAYNOVSKY	6-17-172.3	5.034
10	WILLIAM R. BENNETT AND TERRY L. BENNETT	6-17-172.11	2.5035
11	DAVID L. FURBER AND MARY LOU FURBER	6-17-172.5	7.5035
12	THOMAS SCOTT TOMINACK	6-17-172.7	4.434
13	THOMAS S. TOMINACK AND M. D. TOMINACK	6-17-172.8	4.519
14	MARK A. KNOX AND ALAINE S. KNOX	6-17-172.10	3.82
15	THOMAS MILLER AND CATHY MILLER	6-17-172.17	2.0

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
A	MELVIN W. & CAROL M. KAHLE JR.	6-17-170.2	1.147
B	MELVIN W. KAHLE JR.	6-17-35	37.99
C	FRANCIS A. & D.M. RIGGS	6-10E-3	4.00
D	CHAS M. SLEDD COMPANY	7-TW-1.1	3.55
E	CHAS M. SLEDD COMPANY	7-TW-2	5.84
F	NAGLE FAMILY IRREVOCABLE TRUST	7-TW-3	0.40
G	DHD COUNTY PUBLIC SERV DIST	7-TW-4.1	0.175
H	DHD COUNTY PUBLIC SERV DIST	7-TW-5	0.4
I	DHD COUNTY PUBLIC SERV DIST	7-TW-6	0.45
J	DENNIS L. COOK, SR.	7-TW-7	0.50
K	KEVIN S. & BRENDA A. KOSEM	7-TW-8	1.09
L	JEAN C. LAUFER (LE); CAROLYN L. GUTMAN; MICHAEL E. LAUFER; MARY ANN HESS	7-TW-9	0.55
M	KEVIN S. & BRENDA A. KOSEM	7-TW-10	0.580
N	KEVIN S. & BRENDA A. KOSEM	7-TW-11	2.374
O	KEVIN S. & BRENDA A. KOSEM	7-TW-1	1.0
P	EDWARD B. HARTLEB	7-TW-2.1	0.48
Q	CONNIE DAVIS	6-17-172.16	10.838
R	ROBERT T. & TAMMY L. SELAK	6-17-172.18	0.126
S	RANDALL E. & DEBORAH MARIE BARTLETT	6-17-172.15	1.0
T	CLARK EDWARD MCKEE	6-17-174	61.0
U	LINDA L. CLARK	7-TW-3	10.2562
V	RANDALL E. & D.M. BARTLETT	6-17-172.4	8.944
W	JERRY L. & CYNTHIA KOPYAR	6-17-172.6	3.409
X	WILLIAM J. BRINKMEIER	6-17-175.2	1.856
Y	LOUIS GEORGE BRINKMEIER, JR.	6-17-177	7.17
Z	WILDA (LE) & WILLIAM J. BRINKMEIER	6-17-185.1	3.63
AA	EDWARD M. & CHRISTINE EDGE	6-17-185	18.405
BB	JOHN J. CORRETT	6-17-183	214.774
CC	CHARLES A. & MARY E. BLISS SR	6-17-164	1.9
DD	CHARLES E. & T.D. ANDERSON	6-17-172.2	1.394
EE	CECELIA BOVO	6-17-172	9.078
FF	ADAMS S. III & SARAH G. ANDEL	6-17-172.9	3.03
GG	470 LAND CO, LLC	6-17-158	30.07
HH	JOSEPH T. SUBASIC	6-17-181.1	0.412
II	JOSEPH T. SUBASIC	6-17-161	0.408
JJ	JOHN W. JR. & TERRIE L. BAKER	6-17-170.1	0.5
KK	KAREN J. BUTLER	6-17-180	3.214
LL	RICHARD R. & KAREN J. BUTLER	6-17-180.1	0.184

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,435,790.02
EASTING: 531,957.98

LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,435,403.78
EASTING: 531,617.80

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,434,153.45
EASTING: 532,015.22



- 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 574 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

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

MELVIN KAHLE OHI
OPERATOR'S WELL #: 206H

API WELL #: **47 069 00259**
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1276.3'

DISTRICT: TRIADELPHIA COUNTY: OHIO COUNTY QUADRANGLE: WHEELING & VALLEY GROVE

SURFACE OWNER: MELVIN W. AND CAROL M. KAHLE ACREAGE: ±84.99

OIL & GAS ROYALTY OWNER: MELVIN W. AND CAROL M. KAHLE ACREAGE: ±84.99

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: 6,364' TVD 11,215' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY

ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300

CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

- 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:
	08-28-2018
	FILE NO: 16-51
	DRAWN BY: JMB
	SCALE: 1" = 2000'
	DRAWING NO: 1
	WELL LOCATION PLAT 1

WELL LOCATION PLAT 1	DRAWING NO. 1	SCALE: 1" = 2000'	DRAWN BY: JMB	FILE NO: 18-51	DATE: 08-28-2018
REVISIONS:	REVISED:	CITY: JANE LEW	STATE: WV	ZIP CODE: 26378	ADDRESS: P.O. BOX 1300
DESIGNATED AGENT: BRITANNY WOODY	WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL TYPE: OIL	WASTE DISPOSAL	PRODUCTION	DEEP

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

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

WATERSHED: UPPER OHIO SOUTH
DISTRICT: TRIADAPLHIA
COUNTY: OHIO COUNTY
ELEVATION: 1258.3'
QUADRANGLE: WHEELING & VALLEY GROVE
ACREAGE: ±84.99
ACREAGE: ±84.99

OIL & GAS ROYALTY OWNER: MELVIN W. AND CAROL M. KAHL
SURFACE OWNER: MELVIN W. AND CAROL M. KAHL

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

CONVERT **PLUG & ABANDON** **CLEAN OUT & REPLUG** **OTHER CHANGE** (SPECIFY AS-DRILED)
ESTIMATED DEPTH: 6364' TVD 11212' TMD

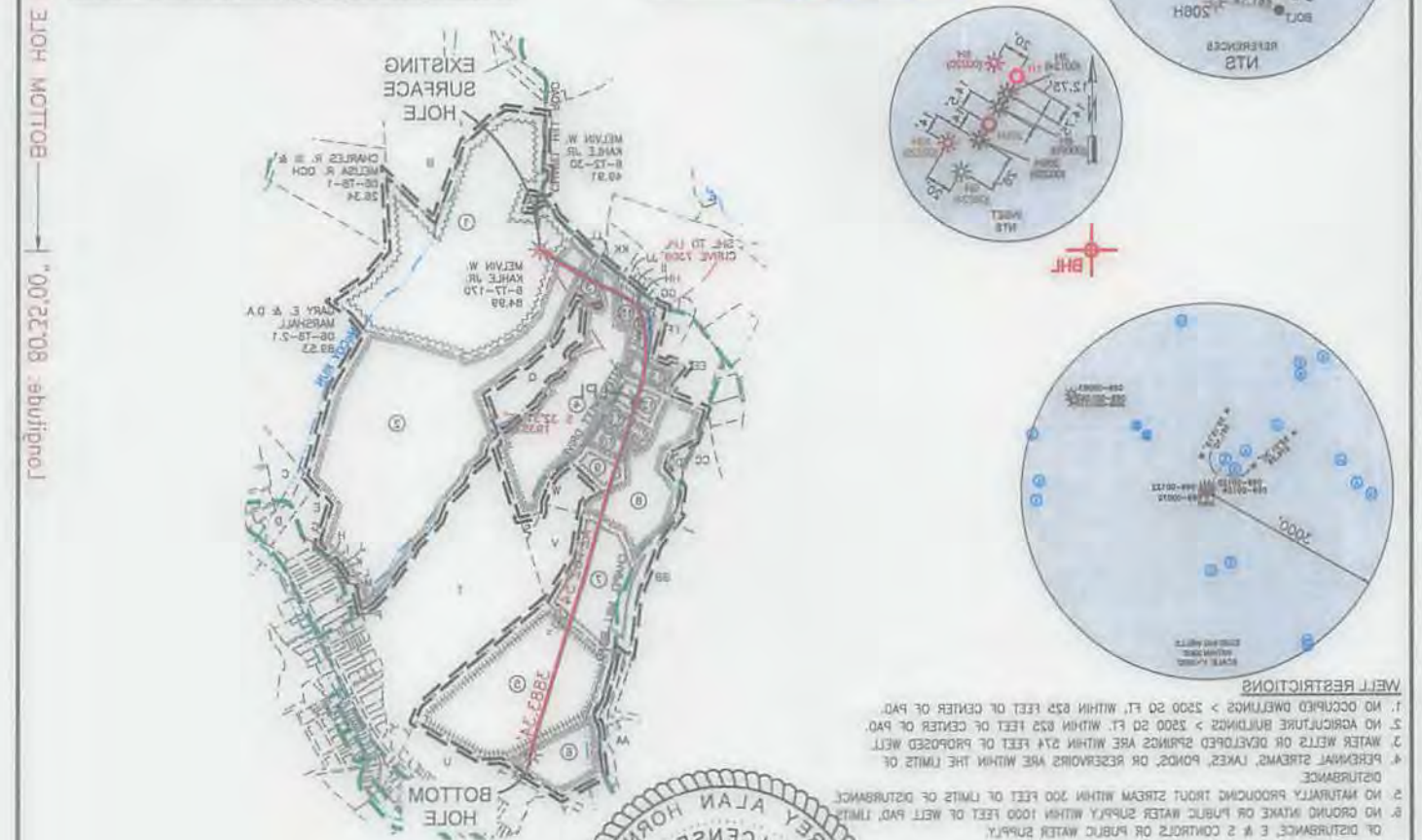
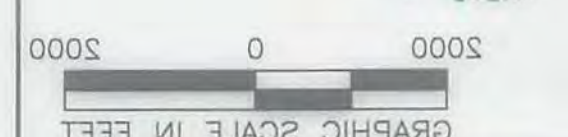
WV DEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

UNITED STATES TOPOGRAPHIC MAPS
 (+) DENOTES LOCATION OF WELL ON
 ACCURACY: 1/300
 DEGREE OF
 MINIMUM

API WELL #: 47
STATE: OHIO
COUNTY: PERMIT
PERMIT: 00259

OPERATOR'S WELL #: 208H
MELVIN KAHL OHI

SWN Production Company, LLC
SWN Production Company, LLC



WELL SITE TABLE FOR SURFACE PROPERTY OWNERS		WELL SITE TABLE FOR SURFACE PROPERTY OWNERS	
TRACT	TAX PARCEL	TRACT	TAX PARCEL
1	8-17-170	1	8-17-170
2	8-17-171	2	8-17-171
3	8-17-172	3	8-17-172
4	8-17-173	4	8-17-173
5	8-17-174	5	8-17-174
6	8-17-175	6	8-17-175
7	8-17-176	7	8-17-176
8	8-17-177	8	8-17-177
9	8-17-178	9	8-17-178
10	8-17-179	10	8-17-179
11	8-17-180	11	8-17-180
12	8-17-181	12	8-17-181
13	8-17-182	13	8-17-182
14	8-17-183	14	8-17-183
15	8-17-184	15	8-17-184
16	8-17-185	16	8-17-185
17	8-17-186	17	8-17-186
18	8-17-187	18	8-17-187
19	8-17-188	19	8-17-188
20	8-17-189	20	8-17-189
21	8-17-190	21	8-17-190
22	8-17-191	22	8-17-191
23	8-17-192	23	8-17-192
24	8-17-193	24	8-17-193
25	8-17-194	25	8-17-194
26	8-17-195	26	8-17-195
27	8-17-196	27	8-17-196
28	8-17-197	28	8-17-197
29	8-17-198	29	8-17-198
30	8-17-199	30	8-17-199
31	8-17-200	31	8-17-200

Longitude: 80.2120, Bottom Hole 6222, Surface Hole 4512, Latitude: 40.0200, Surface Hole 60, Longitude: 80.2120, Bottom Hole 6222, Surface Hole 4512, Latitude: 40.0200, Surface Hole 60

ELK LAKE SERVICES, LLC
 280 Indian Springs Road,
 Suite 123 Indian, PA 15701
 Phone: (724) 463-7303

SURFACE HOLE LOCATION (SHL):
 UTM (NAD83, ZONE 17, METERS):
 NORTHING: 4432,780.02
 EASTING: 531,957.98

LANDING POINT (L.P.L.):
 UTM (NAD83, ZONE 17, METERS):
 NORTHING: 4432,284.87
 EASTING: 531,848.88

BOTTOM HOLE LOCATION (B.H.L.):
 UTM (NAD83, ZONE 17, METERS):
 NORTHING: 4434,182.83
 EASTING: 532,012.72

WELL RESTRICTIONS:
 1. NO OCCUPIED DWELLINGS > 2500 SQ FT, WITHIN 525 FEET OF CENTER OF PAD.
 2. NO AGRICULTURE BUILDINGS > 2500 SQ FT, WITHIN 825 FEET OF CENTER OF PAD.
 3. WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 274 FEET OF PROPOSED WELL.
 4. PERMANENT STREAMS, LAKES, PONDS, OR RESERVOIRS ARE WITHIN THE LIMITS OF DISTURBANCE.
 5. NO NATURALLY PRODUING TIGHT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
 6. NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD LIMIT.
 7. 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 INSETS ARE GRID NORTH UNLESS OTHERWISE SPECIFIED.

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.2. 2184