

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

API 47-069-00319 County OHIO District RICHLAND
Quad TILTONSVILLE, OH-WV Pad Name EDWARD DREMAK-OHI-PAD1 Field/Pool Name PANHANDLE FIELD WET
Farm name ANDREW JOHN EVICK Well Number EDWARD DREMAK OHI 410H
Operator (as registered with the OOG) SWN PRODUCTION COMPANY, LLC
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,445,417.06 Easting 529,668.24
Landing Point of Curve Northing 4,445,538.57 Easting 530,554.67
Bottom Hole Northing 4,443,050.10 Easting 531,250.44

Elevation (ft) 1088' 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 10/10/2019 Date drilling commenced 1/2/2020 Date drilling ceased 1/12/2020
Date completion activities began 4/24/2020 Date completion activities ceased 5/14/2020
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

RECEIVED
Office of Oil and Gas
AUG 04 2020

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 WV Department of Environmental Protection
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 by:  9-10-20

API 47-069 - 00319 Farm name **ANDREW JOHN EVICK** Well number **EDWARD DREMAK OHI 410H**

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24	20	126'	NEW	J-55/94#		Y
Surface	17.5	13.375	367'	NEW	J-55/54.50#	281.8' / 239.9'	Y; 15 BBLs
Coal							
Intermediate 1	12.25	9.625	1,653'	NEW	J-55/36#		Y; 17 BBLs
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	15,278'	NEW	P-110 CYHP/20#		Y; 26 BBL
Tubing		2.875	7,085'	NEW	P-110/6.50#		N
Packer type and depth set							

Comment Details

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	360	15.60	1.20	432	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	574	15.60	1.19	683.06	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2,640	15.60	1.19	3,141.6	SURFACE	24
Tubing							

Drillers TD (ft) 15,278'

Deepest formation penetrated MARCELLUS

Plug back procedure N/A

Loggers TD (ft) 15,278'

Plug back to (ft) N/A

Kick off depth (ft) 6,110'

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

RECEIVED
Office of Oil and Gas

AUG 04 2020

WV Department of
Environmental Protection

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

**EDWARD DREMAK OHI 410H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MDZ	# SHOTS PER STG
1	3/11/2020	15,189	15,097	36
2	4/15/2020	15,061	14,884	36
3	4/15/2020	14,851	14,674	36
4	4/16/2020	14,637	14,464	36
5	4/16/2020	14,431	14,254	36
6	4/16/2020	14,221	14,044	36
7	4/17/2020	14,009	13,834	36
8	4/17/2020	13,801	13,624	36
9	4/18/2020	13,588	13,414	36
10	4/18/2020	13,381	13,203	36
11	4/18/2020	13,170	12,993	36
12	4/19/2020	12,960	12,783	36
13	4/19/2020	12,750	12,573	36
14	4/20/2020	12,540	12,363	36
15	4/20/2020	12,330	12,153	36
16	4/20/2020	12,120	11,946	36
17	4/21/2020	11,910	11,732	36
18	4/21/2020	11,700	11,523	36
19	4/21/2020	11,490	11,313	36
20	4/22/2020	11,280	11,103	36
21	4/22/2020	11,066	10,893	36
22	4/22/2020	10,860	10,683	36
23	4/22/2020	10,650	10,473	36
24	4/23/2020	10,440	10,263	36
25	4/23/2020	10,230	10,051	36
26	4/23/2020	10,022	9,843	36
27	4/24/2020	9,806	9,632	36
28	4/24/2020	9,602	9,422	36
29	4/24/2020	9,389	9,212	36
30	4/24/2020	9,179	9,005	36
31	4/25/2020	8,969	8,792	36
32	4/25/2020	8,756	8,582	36
33	4/25/2020	8,549	8,372	36
34	4/26/2020	8,339	8,162	36
35	4/26/2020	8,129	7,954	36
36	4/26/2020	7,919	7,741	36
37	4/26/2020	7,712	7,532	36
38	4/27/2020	7,499	7,322	36
39	4/27/2020	7,289	7,112	36
40	4/28/2020	7,079	6,902	36

RECEIVED
Office of Oil and Gas
AUG 04 2020

WV Department of
Environmental Protection

**EDWARD DREMAK OHI 410H
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Start Date	Ave Pump		Treatement	Max	Breakdown	ISIP (psi)	Amount of Propane (lbs)	Amount of water bbls	Amount of nitrogen/othe
		Rate (BPM)	Ave							
1	4/15/2020	80	7,204	5,597	3,605	242,210	5,320	0		
2	4/15/2020	91	7,770	5,091	4,408	415,980	7,677	0		
3	4/15/2020	94	7,675	5,219	4,322	417,880	8,201	0		
4	4/16/2020	96	8,020	5,214	4,511	379,180	7,028	0		
5	4/16/2020	98	7,932	4,982	4,579	418,540	7,999	0		
6	4/17/2020	85	7,885	5,513	4,482	421,800	8,165	0		
7	4/17/2020	96	7,791	5,861	4,592	419,480	7,601	0		
8	4/17/2020	97	7,934	5,782	4,410	426,300	7,958	0		
9	4/18/2020	96	7,791	5,891	4,727	417,500	7,162	0		
10	4/18/2020	99	7,950	5,605	4,640	421,600	7,206	0		
11	4/19/2020	100	7,745	4,636	4,376	427,960	7,557	0		
12	4/19/2020	99	7,823	5,545	4,664	417,160	7,367	0		
13	4/19/2020	100	7,566	5,122	4,328	418,940	7,471	0		
14	4/20/2020	100	7,860	5,710	4,481	419,760	7,182	0		
15	4/20/2020	100	7,724	5,012	4,511	419,360	7,208	0		
16	4/21/2020	101	7,771	6,393	4,154	416,690	7,189	0		
17	4/21/2020	99	7,763	6,045	4,487	401,900	7,050	0		
18	4/21/2020	100	7,461	5,807	4,394	419,580	7,264	0		
19	4/22/2020	100	7,620	5,746	4,241	423,440	7,221	0		
20	4/22/2020	100	7,521	5,589	4,359	423,080	7,308	0		
21	4/22/2020	100	7,231	5,598	4,710	425,720	7,152	0		
22	4/22/2020	101	7,397	4,621	4,432	420,480	7,411	0		
23	4/23/2020	101	7,399	5,725	4,736	425,200	7,369	0		
24	4/23/2020	101	7,347	5,289	4,781	425,320	7,140	0		
25	4/23/2020	101	7,287	5,937	4,365	424,260	7,396	0		
26	4/23/2020	101	7,146	5,593	4,356	424,860	7,368	0		
27	4/24/2020	100	7,328	6,123	4,451	424,690	7,234	0		
28	4/24/2020	100	7,153	6,051	4,585	420,360	7,242	0		
29	4/24/2020	100	7,396	5,697	4,297	420,310	7,273	0		
30	4/25/2020	101	7,153	5,791	4,325	425,210	7,306	0		
31	4/25/2020	100	7,148	5,584	4,400	422,230	7,460	0		
32	4/25/2020	100	6,935	5,585	4,443	417,200	7,357	0		
33	4/26/2020	101	7,071	5,434	4,223	422,280	7,525	0		
34	4/26/2020	101	7,023	5,439	4,566	424,540	7,216	0		
35	4/26/2020	98	7,763	6,148	4,524	424,910	7,488	0		
36	4/26/2020	100	7,018	5,782	4,426	415,300	7,204	0		
37	4/27/2020	99	7,514	5,505	4,342	425,860	7,174	0		
38	4/27/2020	99	6,998	6,217	4,454	417,360	7,376	0		
39	4/27/2020	99	7,060	5,345	4,253	418,090	7,107	0		
40	4/28/2020	99	6,617	6,056	4,158	424,070	7,126	0		

RECEIVED
Office of Oil and Gas
AUG 04 2020
WV Department of
Environmental Protection

Well Name:

Edward Dremak OHI 410H

47069003190000

RECEIVED
Office of Oil and Gas

AUG 04 2020

WV Department of
Environmental Protection

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	1309.00	1305.00	
Big Injun (ss)	1309.00	1305.00	1892.00	1866.00	
Berea (siltstone)	1892.00	1866.00	5982.00	5253.00	
Rhinestreet (shale)	5982.00	5253.00	6310.00	5506.00	
Cashqua (shale)	6310.00	5506.00	6381.00	5556.00	
Middlesex (shale)	6381.00	5556.00	6485.00	5620.00	
Burket (shale)	6485.00	5620.00	6514.00	5637.00	
Tully (ls)	6514.00	5637.00	6620.00	5689.00	
Mahantango (shale)	6620.00	5689.00	6847.00	5778.00	
Marcellus (shale)	6847.00	5778.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date: 4/15/2020

Job End Date: 4/28/2020

State: West Virginia

County: Ohio

API Number: 47-069-00319-00-00

Operator Name: Southwestern Energy

Well Name and Number: EDWARD DREMAK OH1 410

Latitude: 40.15858539

Longitude: -80.65162581

Datum: NAD83

Federal Well: NO

Indian Well: NO

True Vertical Depth: 5,864

Total Base Water Volume (gal): 12,227,436

Total Base Non Water Volume: 0



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
Base Water	Operator	Base Fluid					
HCL	SWN Well Services	Solvent					

Hydraulic Fracturing Fluid Composition:

RECEIVED
Office of Oil and Gas
AUG 04 2020
West Virginia Department of Environmental Protection

RECEIVED
Office of Oil and Gas
AUG 04 2020
WV Department of
Environmental Protection

Toxicide PS 50A	SWN Well Services	Bicide		Listed Below			
Plexaid 655WG	SWN Well Services	Scale Inhibitor		Listed Below			
Sand	SWN Well Services	Proppant		Listed Below			
Econo-C1200	SWN Well Services	Corrosion Inhibitor		Listed Below			
SWN FRW-11LC	SWN Well Services	Friction Reducer		Listed Below			
Ecopol-FCAC	SWN Well Services	Iron Control		Listed Below			
				Listed Below			
Water			7732-18-5	100.00000	85.36414	Density = 8.345	
Crystalline Silica, quartz			14808-60-7	100.00000	13.90131		
Water			7732-18-5	85.00000	0.59470		
Hydrochloric Acid			7647-01-0	15.00000	0.09076		
Petroleum Distillates, Hydroreated			64742-47-8	25.00000	0.02325		
Tetrakis			55566-30-8	55.00000	0.01457		
Glycerin			56-81-5	50.00000	0.00291		
Ammonium Chloride			12125-02-9	2.00000	0.00186		

RECEIVED
Office of Oil and Gas
AUG 04 2020
WV Department of
Environmental Protection

			68551-12-2	1.50000	0.00140
			93-83-4	1.50000	0.00140
			64-19-7	37.50000	0.00121
			67-56-1	80.00000	0.00074
			77-92-9	22.50000	0.00073
			15827-60-8	10.00000	0.00058
			397256-50-7	1.00000	0.00026
			68951-67-7	9.67400	0.00009
			61790-12-3	5.02700	0.00005
			68527-49-1	4.74600	0.00004
			127-08-2	0.02200	0.00000
			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)

LATITUDE: 40°10'00" SURFACE HOLE (2000' SCALE) | 7438'

LATITUDE: 40°10'00" BOTTOM HOLE (2000' SCALE) | 2277'

LONGITUDE: 80°37'30" SURFACE HOLE (2000' SCALE) | 2969'

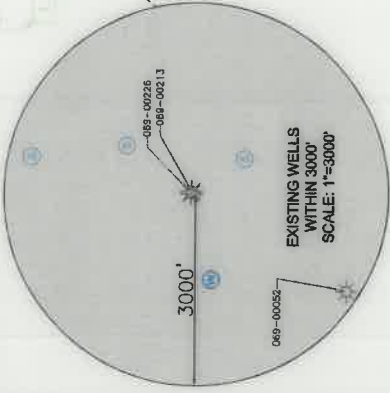
LONGITUDE: 80°37'30" BOTTOM HOLE (2000' SCALE) | 10753'



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



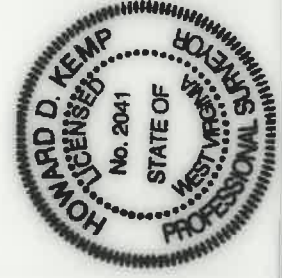
EDWARD DREMAK OHI
410H



SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445417.06 EASTING: 5296685.24
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445538.57 EASTING: 530554.67
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4443050.10 EASTING: 531250.44
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445417.06 EASTING: 5296685.24
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4445469.40 EASTING: 530596.22
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4443047.25 EASTING: 531250.47

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
Howard D. Kemp 4/15/20



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034



WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS
WATERSHED: UPPER OHIO SOUTH
DISTRICT: RICHLAND
SURFACE OWNER: ANDREW JOHN EVICK
OIL & GAS ROYALTY OWNER: EDWARD W. & JOANNE V. DREMAK
DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PLUG OUT & REPLUG OTHER CHANGE AS-DRILLED
TARGET FORMATION: MARCELLUS

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

- LEGEND:
- EXISTING BOTTOM HOLE
 - ⊙ EXISTING / PRODUCING WELLHEAD
 - LPL* EXISTING LANDING POINT LOCATION
 - PROPOSED SURFACE HOLE / BOTTOM HOLE
 - LPL* PROPOSED LANDING POINT LOCATION
 - ACCESS ROAD
 - PUBLIC ROAD
 - FLOOD PLAN
 - LEASE BOUNDARY
 - AS-DRILLED PATH
 - PROPOSED PATH

- NOTES ON SURVEY
- COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AS WELL AS WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
 - ALL OTHER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE OBTAINED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR OTHER FIELD LOCATIONS.
 - THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
 - NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
 - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO OTHER PRODUING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.



LINE	BEARING	DISTANCE
L1	S84°13'40"W	782.22'
L2	N79°52'03"W	793.01'



COMPANY: SWN Production Company, LLC Production Company™



EDWARD DREMAK OHI
OPERATOR'S WELL #: 410H
API WELL #: 47 069 00319
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SURVEY GRADE GPS
ELEVATION: (NAVD 88, US FT)

ELEVATION: 1,088.0'
QUADRANGLE: TILTONSVILLE, OH-WV
ACREAGE: ±34.19
ACREAGE: ±34.19
PERFORATE NEW FORMATION

DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT DRIVE, SUITE 201
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

REVISIONS:
DATE: 04-08-2020
API NO: 47-069-00319
DRAWN BY: R. GRIMES
SCALE: 1" = 3000'
DRAWING NO: 2018-284
WELL LOCATION PLAN

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	ANDREW JOHN EVICK (S) EDWARD W. & JOANNE V. DREMAK (R)	04-R5-54.0
TRACT		
2	SURFACE OWNER ANDREW JOHN EVICK	04-R5-49.0
3	WINDSOR POWER HOUSE COAL COMPANY	04-R8-08.1
4	OHIO COUNTY BOARD OF COMMISSIONERS	04-R5-10.0
5	OHIO COUNTY BOARD OF COMMISSIONERS	04-R5-55.0
6	LISA NUZUM HAWORTH	04-R5-55.1
7	ROBERT L. & GWENDOLYN NOVAK	04-R5-59.0
8	SHORT CREEK UNITED METHODIST CHURCH	04-R5-60.0
9	SHORT CREEK CEMETERY ASSOCIATION, TRUSTEES	04-R5-57.0
10	AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC	04-R8-15.0
11	AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC	04-R8-61.0
12	TUNNEL RIDGE, LLC	04-R8-61.4

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	OHIO COUNTY BOARD OF COMMISSIONERS	04-R5-10.0
B	MARC SEAMON	04-R6-02.0
C	RAYLE COAL COMPANY	04-R6-17.3
D	RAYLE COAL COMPANY	04-R6-17.0
E	MARC SEAMON	04-R6-37.0
F	MARC SEAMON	04-R6-37.1
G	DELBERT E. HUFFMAN, JR.	04-R8-18.4
H	LUTHER R. SMITH, JR.	04-R8-18.3
I	LUTHER R. SMITH, JR.	04-R8-18.1
J	JOHN E. HARWATT	04-R8-18.2
K	LUTHER R. SMITH, JR.	04-R8-14.4
L	JAMES W. PERRY, JOSEPH F. PERRY, LEWIS A. PERRY, JR. & JOHN C. PERRY (LIFE ESTATE: HELEN M. PERRY)	04-R9-14.2
M	JAMES W. PERRY, JOSEPH F. PERRY, LEWIS A. PERRY, JR. & JOHN C. PERRY (LIFE ESTATE: HELEN M. PERRY)	04-R9-14.1
N	JORDAN & GAYLE WEBER	04-R9-09.0
O	LEWIS R. JR. & ROSEANNE F. HOPKINS	04-R9-05.0
P	WILLIAM ISAAC KNIGHT, II & MEREDITH SERTICH	04-R9-03.7
Q	STACY D. EVANS (LIFE ESTATE: LADONNA MARTIN EVANS)	04-R9-03.5
R	BETH ANNE KENNEDY	04-R9-03.4
S	RCK 2 GROUP, LLC	04-R9-01.0
T	WILLIAM H. & CAROL L. REUTHER	04-R9-02.0
U	BRADFORD W. & NANETTA B. HARTLEY	04-R9-01.3
V	GREGORY TAGGART	04-R8-50.0
W	DOMINIC J. & SHERRIE D. COTTRELL	04-R12-19.30
X	ELIAS JOSEPH	04-R12-01.0
Y	TUNNEL RIDGE, LLC	04-R12-01.3
Z	TUNNEL RIDGE, LLC	04-R11-34.3
AA	TUNNEL RIDGE, LLC	04-R11-34.12
AB	TUNNEL RIDGE, LLC	04-R6-61.2
AC	SANDCREST FOUNDATION, INC	04-R11-15.0
AD	TUNNEL RIDGE, LLC	04-R8-61.1
AE	TUNNEL RIDGE, LLC	04-R6-74.0
AF	TUNNEL RIDGE, LLC	04-R8-60.1
AG	TUNNEL RIDGE, LLC	04-R8-59.0
AH	TUNNEL RIDGE, LLC	04-R8-22.1
AI	TUNNEL RIDGE, LLC	04-R8-22.0
AJ	TUNNEL RIDGE, LLC	04-R8-21.2
AK	TUNNEL RIDGE, LLC	04-R8-27.7
AL	TUNNEL RIDGE, LLC	04-R8-27.6
AM	TUNNEL RIDGE, LLC	04-R8-15.4
AN	CHARLES W. & MARLEEN M. MILLER	04-R8-15.3
AO	STATE OF WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	04-R8-9999.99999
AP	DEBRA S. SHEPHERD	04-R8-15.2
AQ	SONYA CARROLL, GERTRUDE (TRUDY) ETHRIDGE, BRENDA HERCULES, CHARLES W. HERCULES, DERRICK WAYNE HERCULES, LOIS E. HERCULES, LOUIS R. HERCULES, SIDNEY HERCULES, YVONNE LOUGH & CONNIE SMITH	04-R8-07.0
AR	ALLIANCE RESOURCE GROUP, LLC	04-R8-06.0
AS	JUDITH K. TYLER	04-R8-08.8
AT	SM L. JR. & AMY M. PELLEN	04-R8-08.0
AU	PEGGY LEE CLARK, ARTHUR WAYNE ENNIS & ALMA DIANE SINOWICH	04-R8-09.0
AV	MICHAEL W. DAVIS	04-R8-09.1
AW	EUNICE MAE DAVIS	04-R8-09.3
AX	EUNICE MAE DAVIS, BRYAN EVERETT DAVIS & CHARLOTTE DAVIS TOOTHMAN	04-R8-09.2
AY	JOYCE ANN FARLEY	04-R8-10.1
AZ	JOYCE ANN FARLEY	04-R8-10.2
BA	HAROLD W. SNYDER, RUSSELL PELLEN, JOYCE ANN FARLEY, JEFFREY A. MCGEE & PAULA JO MCGEE	04-R8-10.0
BB	MARK D. MATTHIAS	04-R8-11.1
BC	MARK D. MATTHIAS	04-R8-11.0
BD	RHONDA J. ROBBINS	04-R8-13.2
BE	RODNEY SNYDER	04-R8-13.0
BF	RIKKE SNYDER	04-R8-14.0
BG	AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC	04-R5-56.0
BH	AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC	04-R5-56.2
BI	AMERICAN DISPOSAL SERVICES OF WEST VIRGINIA, INC	04-R5-56.1
BJ	GORDON E. & DEBORAH P. DREMAK	04-R8-08.15
BK	OHIO COUNTY BOARD OF COMMISSIONERS	04-R8-08.16
BL	TUNNEL RIDGE, LLC	04-R8-08.17
BM	TUNNEL RIDGE, LLC	04-R8-08.14
BN	TUNNEL RIDGE, LLC	04-R8-08.2
BO	SUSAN L. CAIN	04-R8-08.3
BP	TUNNEL RIDGE, LLC	04-R8-08.18
BO	THE KATHLEEN S. CRAFT FOUNDATION & THE JOSEPH W. CRAFT, III FOUNDATION	04-R5-52.0
BR	THE KATHLEEN S. CRAFT FOUNDATION & THE JOSEPH W. CRAFT, III FOUNDATION	04-R5-53.0
BS	WINDSOR POWER HOUSE COAL COMPANY	04-R5-50.0
BT	RICHARD L. & DEBORAH K. BLACK	04-R5-58.1
BU	LARRY & LISA WALLEY	04-R6-58.0
BV	BRYAN K. & LAURA L. PETTIT	04-R5-55.4
BW	LISA NUZUM HAWORTH	04-R5-55.3
BX	LUTHER R. II & D.F. SMITH	04-R8-16.1
BY	DELBERT E. & CAROL L. HUFFMAN	04-R8-16.2

REVISIONS:

COMPANY:

SWN
Production Company, LLC

SWN
Production Company™

OPERATOR'S

EDWARD DREMAK OHI

WELL #:

410H

DISTRICT:
RICHLAND

COUNTY:
OHIO

STATE:
WV

DATE: 04-08-2020
API NO: 47-069-00319

DRAWN BY: R. GRIMES

SCALE: N/A

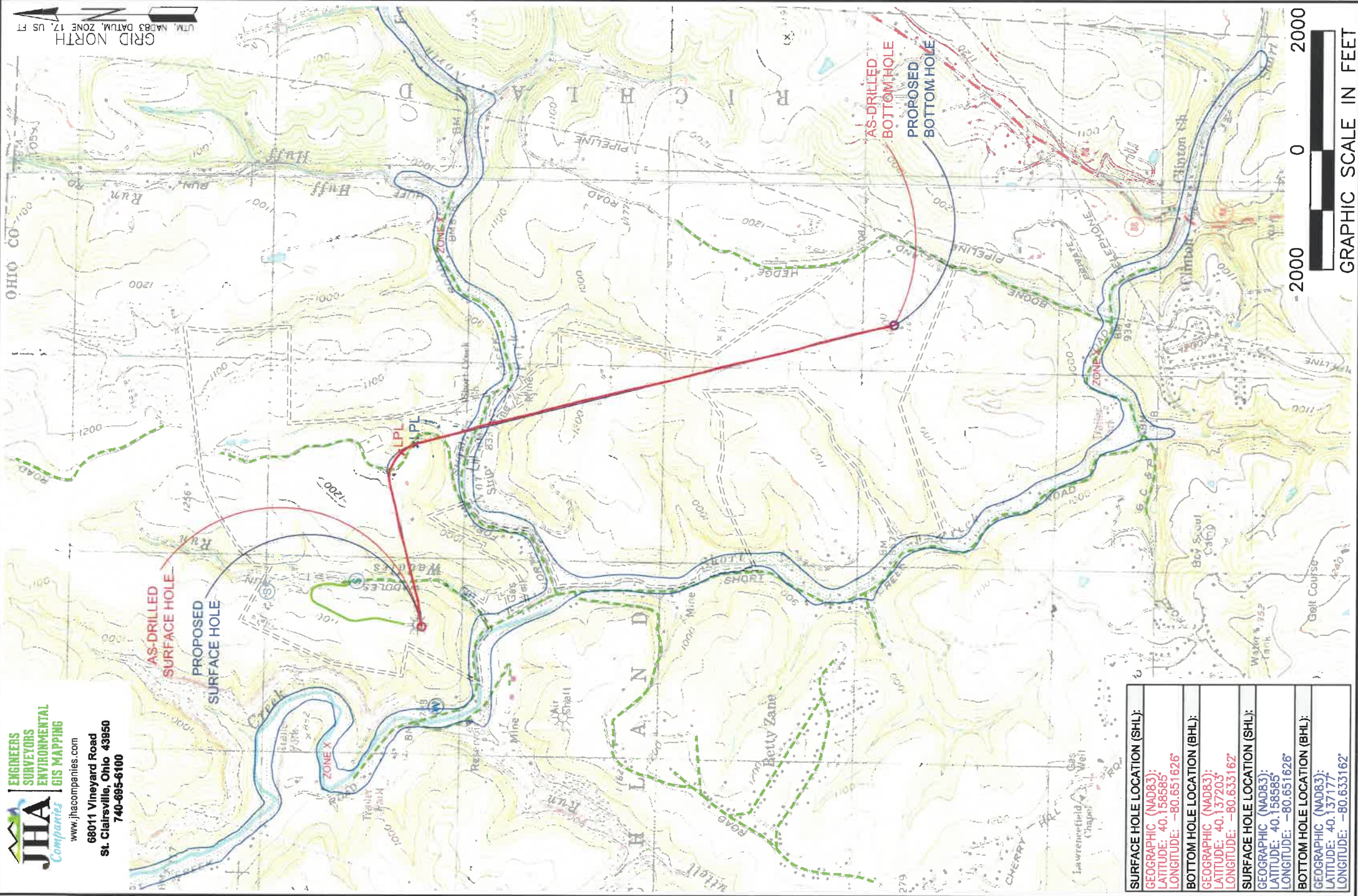
DRAWING NO: 2018-284

WELL LOCATION PLAT

COMPLETION ID 2501168636
PAD ID 3001165860

JHA
Companies
ENGINEERS SURVEYORS ENVIRONMENTAL GIS MAPPING
 www.jhacompanies.com
 68011 Vineyard Road
 St. Clairsville, Ohio 43950
 740-895-6100

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



GRAPHIC SCALE IN FEET

SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.158585°
LONGITUDE: -80.651626°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.137203°
LONGITUDE: -80.633162°
SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.158585°
LONGITUDE: -80.651626°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.137177°
LONGITUDE: -80.633162°

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 PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

- LEGEND:**
- EXISTING BOTTOM HOLE
 - ★ EXISTING / PRODUCING WELLHEAD
 - LPI* EXISTING LANDING POINT LOCATION
 - PROPOSED SURFACE HOLE / BOTTOM HOLE
 - LPI* PROPOSED LANDING POINT LOCATION
 - ACCESS ROAD
 - PUBLIC ROAD
 - FLOOD PLAN
 - LEASE BOUNDARY
 - AS DRILLED PATH
 - PROPOSED PATH

WELL OPERATOR:	WELL (FARM) NAME:	WELL #	SERIAL #
SWN PRODUCTION COMPANY, LLC	EDWARD DREMAK OHI	410H	XXXX
ADDRESS:	COUNTY:	CODE:	API #
1300 FORT PORT DRIVE, SUITE 201, MORGANTOWN, WV 26508	OHIO	069	47-069-00319
SURFACE OWNER:	DISTRICT:	LEASE BOUNDARY	AS DRILLED PATH
ANDREW JOHN EVICK	RICHLAND	—	—
USGS 7 1/2 QUADRANGLE MAP NAME:			
TILTONSVILLE, OH-WV			

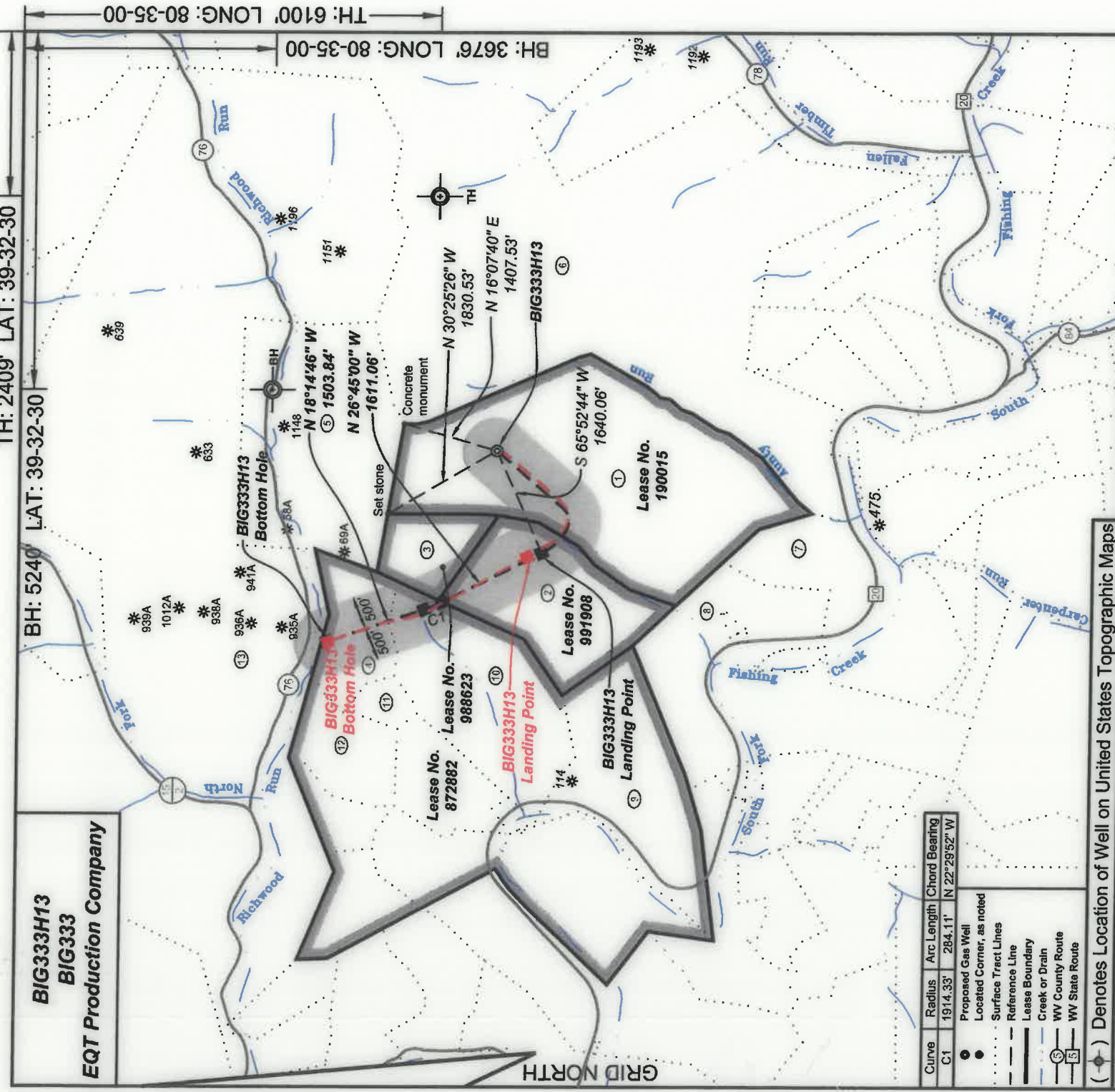
TH: 2409' LAT: 39-32-30

BH: 5240' LAT: 39-32-30

TH: 6100' LONG: 80-35-00

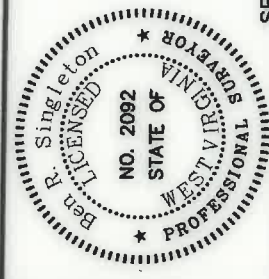
BH: 3676' LONG: 80-35-00

BIG333H13
BIG333
EQT Production Company



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 the regulations issued and prescribed by the Department of Environmental Protection.

[Signature]
P.S. 2092

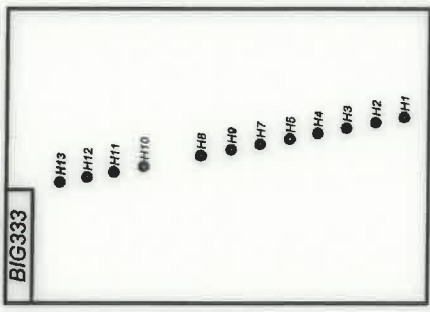


FILE NO: 33-15	DATE: June 18 20 19	SEAL
DRAWING NO: 33-15 BIG333H13	OPERATOR'S WELL NO.: BIG333H13	
SCALE: 1" = 2000'	API WELL NO	
MINIMUM DEGREE OF ACCURACY: 1:2500	47 STATE 103 COUNTY 03295 PERMIT	
PROVEN SOURCE OF ELEVATION: NGS CORS Station	QUADRANGLE: Big Run	
WELL TYPE: <input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL	ACREAGE: 283.6±	
(IF GAS) PRODUCTION: <input type="checkbox"/> STORAGE <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW	ACREAGE: 285±	
LOCATION: ELEVATION: As-Built - 1451' WATERSHED Aunty Run of South Fork Fishing Creek		
DISTRICT: Grant COUNTY: Wetzel		
SURFACE OWNER: Coastal Forest Resources Co., d/b/a Coastal Timberlands Co.		
ROYALTY OWNER: Equitrans, Inc. LEASE NO: 190015		
PROPOSED WORK: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input checked="" type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION		
<input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY)		
<input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 7,643'		
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson		
ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280		
Canonsburg, PA 15317 Bridgeport, WV 26330		

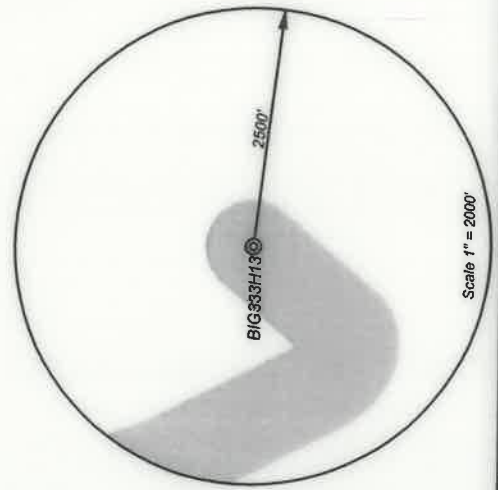
BIG333H13
BIG333
EQT Production Company

Tract ID	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	23	13	Wetzel	Grant	Coastal Forest Resources Co.	283.60
2	23	12	Wetzel	Grant	Larry Laraw, et al.	104.80
3	23	9	Wetzel	Grant	Larry Laraw, et al.	31.50
4	23	4	Wetzel	Grant	Dallison Lumber, Inc.	36.10
5	23	5	Wetzel	Grant	Al Wyatt Heirs	174.68
6	23	14	Wetzel	Grant	Richard B. Dallison, et al.	879.30
7	28	8	Wetzel	Grant	Joseph W. Cerlin	112.90
8	28	6	Wetzel	Grant	Joseph W. Cerlin	190.74
9	23	11,4	Wetzel	Grant	Richard & Roxanne Funk, et al.	66.21
10	23	8	Wetzel	Grant	Richard & Roxanne Funk, et al.	113.81
11	23	3	Wetzel	Grant	Dallison Lumber, Inc.	15.00
12	23	2	Wetzel	Grant	Billy Dwayne Annold, Jr.	36.80
13	17	14	Wetzel	Grant	Coastal Forest Resources Co.	1827.60

As-Drilled Well Info:
BIG333H13 coordinates are
NAD 27 N: 375,168.97 E: 1,692,005.33
NAD 83 UTM N: 4,375,118.95 E: 535,093.53
BIG333H13 Landing Point coordinates are
NAD 27 N: 374,709.93 E: 1,690,449.18
NAD 83 UTM N: 4,374,971.14 E: 534,621.76
BIG333H13 Bottom Hole coordinates are
NAD 27 N: 377,619.74 E: 1,689,196.18
NAD 83 UTM N: 4,375,851.30 E: 534,225.26
West Virginia Coordinate system of 1927 (North Zone) based upon Differential GPS Measurements. Plat orientation, corner and well ties are based upon the grid north meridian.
Well location references are based upon the grid north meridian.
UTM coordinates are NAD83, Zone 17, Meters.



Lease No. 997908
Acres 104.8
Owner Brian C. Fox, et al.
988623 31.5 Larry Laraw, et al.
872882 436 Shibert Estates



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 the regulations issued and prescribed by the Department of Environmental Protection

Ben A. Stebbins
P.S. 2092



FILE NO: 33-15
DRAWING NO: 33-15 BIG333H13
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1:2500
PROVEN SOURCE OF ELEVATION: NGS CORS Station

DATE: June 18 20 19
OPERATOR'S WELL NO.: BIG333H13
API WELL NO 47 - 103 - 03295
STATE COUNTY PERMIT



WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: As-Built - 1451' WATERSHED Aunity Run of South Fork Fishing Creek
DISTRICT: Grant COUNTY: Weizel
SURFACE OWNER: Coastal Forest Resources Co., d/b/a Coastal Timberlands Co. ACREAGE: 283.6±
ROYALTY OWNER: Equitrans, Inc. LEASE NO: 190015 ACREAGE: 285±
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 7,643'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson
ADDRESS: 2400 Ansys Drive, Suite 200 ADDRESS: 115 Professional Place PO Box 280
Canonsburg, PA 15317 Bridgeport, WV 26330