

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

API 47-33-05771 County Harrison District Union
Quad Mount Clare Pad Name Paletta Field/Pool Name _____
Farm name Domineck Paletta Estate C/O Tony Paletta, G. Diane Sullivan Well Number 6H
Operator (as registered with the OOG) PDC Mountaineer, LLC
Address 6031 Wallace Road Extension, Suite 300 City Wexford State PA Zip 15090

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4340251.498 Easting 554624.647
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1,161.4 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) _____
Synthetic Oil-based Mud _____

APPROVED

JUN 30 2017

NAME: Sam Ward
DATE: 8/9/2017

WV Department of Environmental Protection

Date permit issued 9/20/2013 Date drilling commenced 7/5/2015 Date drilling ceased 7/13/2015
Date completion activities began 9/23/2015 Date completion activities ceased 8/30/2016
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 200' Open mine(s) (Y/N) depths N
Salt water depth(s) ft _____ Void(s) encountered (Y/N) depths N
Coal depth(s) ft _____ Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
ec
09/15/2017

API 47-33 - 05771 Farm name Domineck Paletta Estate C/O Tony Paletta, G. Diane Sullivan Well number 6H

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	30"	20"	90'	New	94	N/A	Y
Surface	17.5"	13 3/8"	635'	New	54.5	N/A	Y
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,700'	New	40	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	12,171.0'	New	20	N/A	N
Tubing							
Packer type and depth set							

Comment Details Top of cement for production string brought to 2,450' MD

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	Grout					Surface	8
Surface	Class A 2% CaCl ₂	616	15.6	1.2	739.2	Surface	8
Coal							
Intermediate 1	Class A	536/172	14.50/15.70	1.55/1.29	1052.68	Surface	8
Intermediate 2							
Intermediate 3							
Production	Type 1 4% Gel/Type 1 2% Gel	700/1,050	13.80/15.00	1.64/1.32	3,807.76	2450	8
Tubing							

Drillers TD (ft) 12,173' Loggers TD (ft) 12,173'
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure None

Kick off depth (ft) 6,646' MD

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 _____

13 3/8": 1 bow spring centralizer placed on every joint
 9 5/8": 1 bow spring centralizer placed on every third joint
 5 1/2": 1 rigid poly centralizer every joint in the lateral, 1 rigid poly centralizer every other joint through the curve, 1 rigid poly centralizer every third joint from kick off point to estimated TOC

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS The well was completed in 30 stages utilizing .45" entry hole 2 1/2" gun perforating charges

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

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API 47- 33 - 05771 Farm name Domineck Palotta Estate C/O Tony Palotta, G. Diane Sullivan Well number 6H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	10/11/15	12086	11924	40	Marcellus
2	10/29/15	11896	11774	40	Marcellus
3	10/30/15	11746	11624	40	Marcellus
4	10/30/15	11596	11474	40	Marcellus
5	10/31/15	11446	11324	40	Marcellus
6	10/31/15	11296	11174	40	Marcellus
7	10/31/15	11146	11024	40	Marcellus
8	10/31/15	10996	10874	40	Marcellus
9	11/1/15	10846	10724	40	Marcellus
10	11/1/15	10696	10574	40	Marcellus
11	11/1/15	10546	10424	40	Marcellus
12	11/2/15	10396	10274	40	Marcellus
13	11/2/15	10246	10124	40	Marcellus
14	11/3/15	10096	9974	40	Marcellus
15	11/3/15	9946	9824	40	Marcellus
16	11/3/15	9796	9674	40	Marcellus

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	10/29/15	76	7394	8261	4550	279501	8096	0
2	10/30/15	80	8023	6473	5257	376981	9523	0
3	10/30/15	80	7836	6502	5675	975351	8081	0
4	10/31/15	76	8117	7074	5368	377221	9646	0
5	10/31/15	80	7973	6716	5651	383381	7957	0
6	10/31/15	80	7940	6752	5422	384021	7580	0
7	10/31/15	76	7789	6573	5851	375321	9333	0
8	11/1/15	81	8004	6942	5625	375041	7447	0
9	11/1/15	80	8123	6723	6094	378441	8093	0
10	11/1/15	81	8003	6634	5493	375041	7372	0
11	11/2/15	82	7986	6162	4939	381441	7980	0
12	11/2/15	80	7961	6620	5690	381621	7528	0
13	11/3/15	81	7910	6473	5951	375641	7301	0
14	11/3/15	80	7640	6756	6001	380021	7343	0
15	11/3/15	75	7624	6713	5194	377081	7498	0
16	11/4/15	82	7766	6999	5611	378001	7178	0

Please insert additional pages as applicable.

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API 47- 33 - 05771 Farm name Domineck Paletta Estate C/O Tony Paletta, G. Diane Sullivan Well number 6H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
17	11/4/15	9646	9524	40	Marcellus
18	11/4/15	9496	9374	40	Marcellus
19	11/4/15	9346	9224	40	Marcellus
20	11/5/15	9196	9074	40	Marcellus
21	11/5/15	9046	8924	40	Marcellus
22	11/5/15	8896	8774	40	Marcellus
23	11/6/15	8746	8624	40	Marcellus
24	11/6/15	8596	8474	40	Marcellus
25	11/6/15	8446	8324	40	Marcellus
26	11/7/15	8296	8174	40	Marcellus
27	11/7/15	8146	8024	40	Marcellus
28	11/7/15	7996	7874	40	Marcellus
29	11/8/15	7846	7724	40	Marcellus
30	11/8/15	7696	7574	40	Marcellus

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STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

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Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
17	11/4/15	79	7664	6694	5980	377741	7202	0
18	11/4/15	80	7726	7024	5128	375401	7188	0
19	11/5/15	83	7615	6402	5450	378651	7133	0
20	11/5/15	78	7477	6670	6033	378941	7463	0
21	11/5/15	80	7485	6509	5824	375821	7013	0
22	11/6/15	82	7499	6834	5634	375961	7195	0
23	11/6/15	79	7326	6591	5872	375921	6913	0
24	11/6/15	83	7528	6984	5296	375121	6772	0
25	11/7/15	83	7349	6777	5422	375121	7108	0
26	11/7/15	82	7243	6545	6167	381961	7007	0
27	11/7/15	82	7388	6605	5729	387521	6829	0
28	11/8/15	82	7397	6820	5765	380421	7187	0
29	11/8/15	86	7578	6638	5550	378361	7112	0
30	11/8/15	83	7519	7457	5418	378141	7289	0

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS	
	TVD	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 _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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	
Sands, Silts, and Coals	0	1817	0	1820	Sand, Silt, and Coal
Big Lime	1817	1876	1820	1879	Sandstone
Balltown	3599	3641	3608	3650	Sandstone
Bradford	4332	4361	4341	4371	Sandstone
Benson	4906	4973	4915	4982	Sandstone
Elk	5190	5248	5199	5257	Siltstone
Burkett	6924	6944	7027	7051	Shale
Tully	6944	7000	7051	7117	Limestone
Mahantango	7000	7130	7117	7311	Shale- Gas Show at 7190' MD
Marcellus	7130	7218	7311	12173	Shale-Gas shows through lateral
Purcell	7190	7193	7434	7440	Limestone
Onondaga	7218	7237			Limestone
					*Onondaga MD not listed-lateral drilled in Marcellus**Onondaga top estimated from 4703305741 thickness
					**Big Lime through Elk from 4703305741, Burkett to Purcell taken from mudlog.

Please insert additional pages as applicable.

Drilling Contractor Sidewinder Drilling
Address 952 Echo Land, Suite 460 City Houston State TX Zip 77024

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company Universal Well Services
Address _____ City Buckhannon State WV Zip 26201

Stimulating Company USWS
Address 770 South Post Oak Lane, Suite 405 City Houston State TX Zip 77056

Please insert additional pages as applicable.

Completed by BOBIE LARSEN Telephone 724-940-1204
Signature [Signature] Title Permitting Manager Date 4-19-17

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

09/15/2017

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/21/2015
Job End Date:	11/15/2015
State:	West Virginia
County:	Harrison
API Number:	47-033-05771-00-00
Operator Name:	Arsenal Resources
Well Name and Number:	Paletta 6HM
Latitude:	39.20972800
Longitude:	-80.36748600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,151
Total Base Water Volume (gal):	9,549,414
Total Base Non Water Volume:	



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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
K-BAC 1020	U.S. Well Services, Inc.	Anti-Bacterial Agent					
				Listed Below			
Sand	U.S. Well Services, Inc.	Proppant					
				Listed Below			

Water	Arsenal Resources	Base Fluid					
				Listed Below			
HCL Acid (28%)	U.S. Well Services, Inc.	Bulk Acid					
				Listed Below			
HCL Acid (3%-7.5%)	U.S. Well Services, Inc.	Bulk Acid					
				Listed Below			
WFRA-1000	U.S. Well Services, Inc.	Friction Reducer					
				Listed Below			
SI-1100	U.S. Well Services, Inc.	Scale Inhibitor					
				Listed Below			
HCL Acid (12.6%-18.0%)	U.S. Well Services, Inc.	Bulk Acid					
				Listed Below			
AI-302	U.S. Well Services, Inc.	Acid Corrosion Inhibitors					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			H2O	7732-18-5	100.00000	86.05649	
			Crystalline Silica, Quartz	14808-60-7	100.00000	13.32186	
			Water	7732-18-5	97.00000	0.44658	
			Hydrogen Chloride	7647-01-0	7.50000	0.04009	
			Water	7732-18-5	87.50000	0.03525	

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			Water	7732-18-5	60.00000	0.03239
			2-Propenoic acid, polymer with propanamide	9003-06-9	30.00000	0.01620
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01328
			Water	7732-18-5	80.00000	0.00983
			Water	7732-18-5	80.00000	0.00983
			Hydrogen Chloride	7647-01-0	18.00000	0.00842
			2,2-dibromo-3- nitrilopropionamide	10222-01-2	20.00000	0.00426
			Ethylene Glycol	107-21-1	25.00000	0.00347
			Ethylene Glycol	107-21-1	25.00000	0.00347
			Water	7732-18-5	72.00000	0.00290
			Deionized Water	7732-18-5	28.00000	0.00244
			Copolymer of Maleic and Acrylic Acid	52255-49-9	10.00000	0.00145
			Hydrogen Chloride	7647-01-0	28.00000	0.00131
			Potassium Salt of diethylene triamine penta (methylene phosphonic acid)	15827-60-8	7.50000	0.00124
			Phosphino carboxylic acid polymer	71050-62-9	5.00000	0.00080
			Hexamethylene tramine penta (methylene phosphonic acid)	34690-00-1	5.00000	0.00080
			Water	7732-18-5	95.00000	0.00053
			Hexamethylene diamine penta (methylene phosphonic acid)	23605-74-5	2.00000	0.00032
			2-Propyn-1-olcompound with methyloxirane	38172-91-7	15.00000	0.00008

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

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

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09/15/2017

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

NOTES ON SURVEY

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

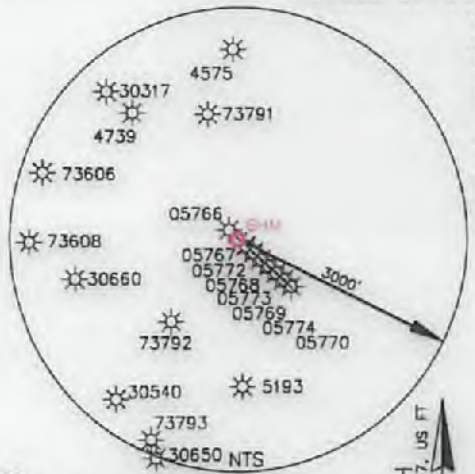


9,592' SHL

8,769' BHL

Latitude: 39°15'00"

Longitude: 80°20'00"

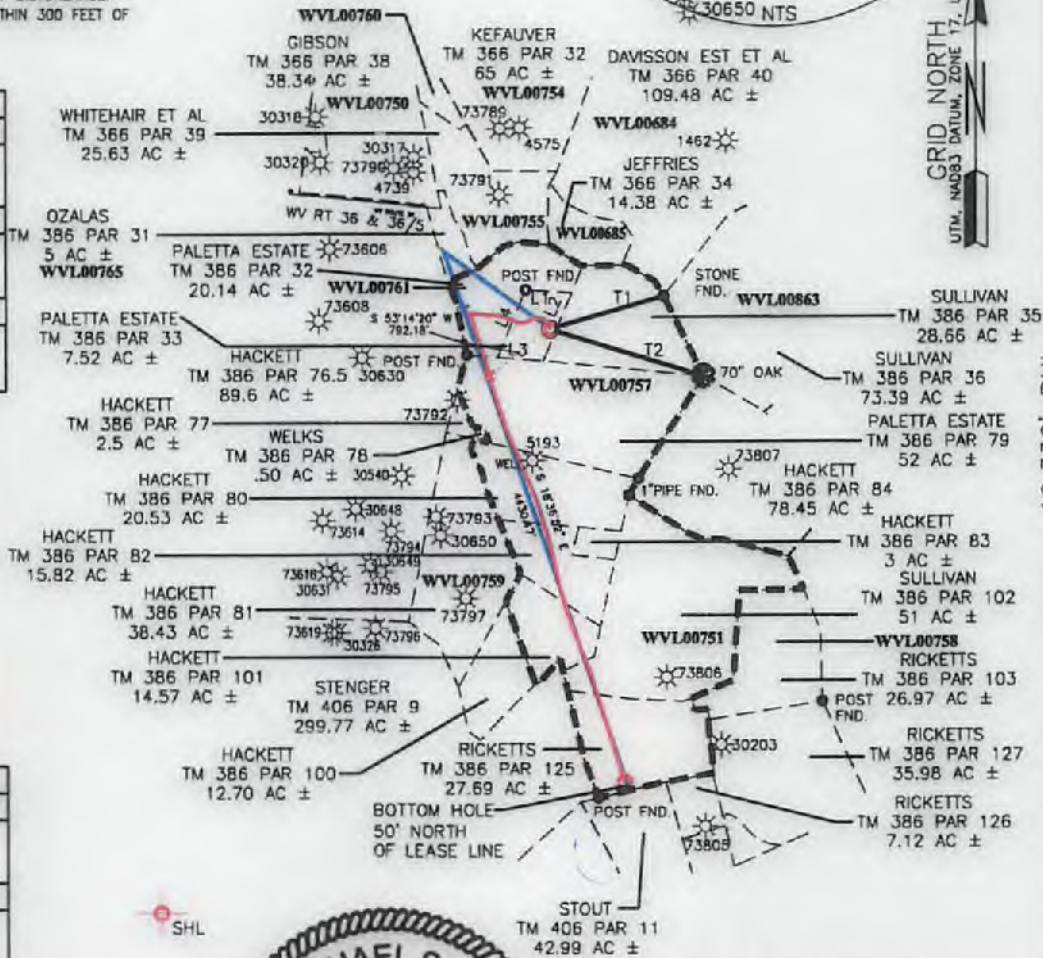


GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

AS-DRILLED COORDINATES:	
SURFACE HOLE LOCATION (SHL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,340,740.71	EASTING: 554,634.80
LANDING POINT LOCATION (LPL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,340,093.05	EASTING: 554,443.82
BOTTOM HOLE LOCATION (BHL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,338,821.05	EASTING: 554,895.95



PROPOSED COORDINATES:	
SURFACE HOLE LOCATION (SHL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,340,240.71	EASTING: 554,634.76
LANDING POINT LOCATION (LPL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,340,296.49	EASTING: 554,359.13
BOTTOM HOLE LOCATION (BHL):	
UTM (NAD83, ZONE 17, METERS):	
NORTHING: 4,338,806.69	EASTING: 554,905.44

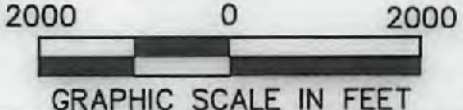


14,671' SHL
19,336' BHL

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.



LINE	BEARING	DISTANCE
L1	S86°10'43"E	487.67'
L2	S23°37'40"W	756.81'
L3	N85°48'29"W	478.81'
L4	N23°04'17"E	750.93'
T1	S74°06'37"W	1237.07'
T2	N73°23'04"W	1676.94'



P.S. 2270

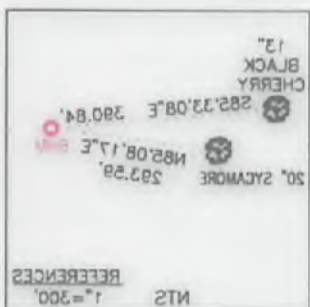
M.S. Wolf 6/23/17

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>OPERATOR'S WELL #: 6HM</p> <p>API WELL #: 47 033 05771</p> <p>STATE COUNTY PERMIT</p>
	<p>WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW</p> <p>WATERSHED: WEST FORK RIVER</p> <p>DISTRICT: UNION COUNTY: HARRISON</p> <p>SURFACE OWNER: DOMINECK PALETTA, ESTATE</p> <p>OIL & GAS ROYALTY OWNER: DOMINECK PALETTA ESTATE C/O TONY PALETTA, DIANE G. SULLIVAN</p> <p>DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION</p> <p>CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE X (SPECIFY) AS-DRILLED</p> <p>TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,151' TWD 12,173' TMD</p>	<p>DESIGNATED AGENT: WILLIAM VEIGEL</p> <p>ADDRESS: 65 PROFESSIONAL PLACE, SUITE 200</p> <p>CITY: BRIDGEPORT STATE: WV ZIP CODE: 26330</p>
<p>LEGEND:</p> <ul style="list-style-type: none"> ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ⊙ EXISTING / PRODUCING WELLHEAD ⊘ ABANDONED WELL ⊗ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR --- LEASE BOUNDARY --- 500' DHP BUFFER --- AS-DRILLED PATH --- PROPOSED PATH 	<p>REVISIONS:</p> <p>DATE: 06-22-2017</p> <p>DRAWN BY: R. DOERR</p> <p>SCALE: 1" = 2000'</p> <p>DRAWING NO: 030-3243</p> <p>WELL LOCATION PLAT</p>	<p>09/15/2017</p>

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THE THRASHER GROUP, INC.
800 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-824-4108

- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
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 - NO DWELLINGS AND BUILDINGS WITHIN 825 FEET OF PROPOSED CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERMANENT STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.



AS-DRIILLED COORDINATES:

LOCATION	UTM (NAD83, ZONE 17, METERS)
SURFACE HOLE LOCATION (SHL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,824.88 NORTHING: 4,340,240.71
LANDING POINT LOCATION (LPL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,824.88 NORTHING: 4,340,240.71
BOTTOM HOLE LOCATION (BHL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,824.88 NORTHING: 4,340,240.71



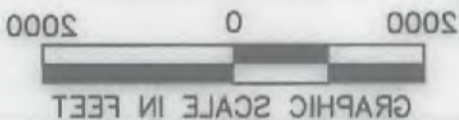
PROPOSED COORDINATES:

LOCATION	UTM (NAD83, ZONE 17, METERS)
SURFACE HOLE LOCATION (SHL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,824.78 NORTHING: 4,340,240.71
LANDING POINT LOCATION (LPL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,824.78 NORTHING: 4,340,240.71
BOTTOM HOLE LOCATION (BHL)	UTM (NAD83, ZONE 17, METERS): EASTING: 524,289.13 NORTHING: 4,338,808.89

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.



LINE	BEARING	DISTANCE
L1	S88°10'43"E	487.87'
L2	S23°27'40"W	788.81'
L3	N82°48'29"W	478.81'
L4	N22°04'17"E	750.92'
L5	S74°08'37"W	1527.07'
L6	N72°23'04"W	1878.84'



PALETTA PAD OPERATOR'S WELL #: 6HM API WELL #: 47 COUNTY PERMIT: 033 05771		UNITED STATES TOPOGRAPHIC MAPS ACCURACY: 1/200 MINIMUM DEGREE OF PROVEN SURVEY: BHL	
WELLS: PRODUCTION, DEEP, GAS, LIQUID INJECTION, STORAGE, SHALLOW WELLS: WASTE DISPOSAL, DRILL DEEPER, REDRILL, CLEAN OUT & REPLUG, OTHER CHANGE (SPECIFY AS-DRIILLED) ESTIMATED DEPTH: 2181' (WV 15112, TWO)		WELLS: PLUGGED & ABANDONED, ABANDONED WELL, EXISTING \ PRODUCING WELLS, PROPOSED SURFACE HOLE \ BOTTOM HOLE	
SURFACE OWNER: DOMINECK PALETTA ESTATE OIL & GAS ROYALTY OWNER: DOMINECK PALETTA ESTATE C/O TONY PALETTA, DANE C. SULLIVAN COUNTY: HARRISON DISTRICT: UNION WATERSHED: WEST FORK RIVER WELL TYPE: OIL		CITY: WEXFORD STATE: WV ZIP CODE: 15090 CITY: BRIDGEPORT STATE: WV ZIP CODE: 26330 ADDRESS: 801 WALLACE ROAD EXTENSION #300 WELL OPERATOR: ARSENAI RESOURCES	
DESIGNATED AGENT: WILLIAM VEGEL ADDRESS: 85 PROFESSIONAL PLACE, SUITE 200 CITY: BRIDGEPORT STATE: WV ZIP CODE: 26330		DATE: 08-22-2017 DRAWN BY: R. DOERR SCALE: 1" = 500' DRAWING NO: 030-3243 WELL LOCATION PLAN	

09/15/2017

THRASHER

THE THRASHER GROUP, INC.
 600 WHITE OAKS BLVD.
 BRIDGEPORT, WV 26330
 PHONE 304-624-4108
 NOTES ON SURVEY

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

DATE: 06/15/2017

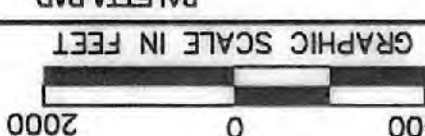
AS-DRIILLED COORDINATES

SURFACE HOLE LOCATION (SHL)	NORTHING: 4,340,240.71	EASTING: 554,634.78
LANDING POINT LOCATION (LPL)	NORTHING: 4,340,296.49	EASTING: 554,559.13
UTM (NAD83, ZONE 17, METERS)		
BOTTOM HOLE LOCATION (BHL)	NORTHING: 4,338,806.69	EASTING: 554,905.44

PROPOSED COORDINATES

SURFACE HOLE LOCATION (SHL)	NORTHING: 4,340,240.71	EASTING: 554,634.78
UTM (NAD83, ZONE 17, METERS)		
LANDING POINT LOCATION (LPL)	NORTHING: 4,340,296.49	EASTING: 554,559.13
UTM (NAD83, ZONE 17, METERS)		
BOTTOM HOLE LOCATION (BHL)	NORTHING: 4,338,806.69	EASTING: 554,905.44

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.



LINE	BEARING	DISTANCE
L1	S86°10'43"E	487.67'
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L3	N85°48'29"W	478.81'
L4	N25°04'17"E	750.83'
L1	S74°08'37"W	1237.07'
L2	N73°23'04"W	1676.94'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DEGREE OF ACCURACY: 1/200
 OPERATOR'S WELL #: PALETTA PAD
 SURVEY PROVEN SOURCE OF GRADE GPS ELEVATION: (NAD 88, US FT) 47
 STATE: WV
 COUNTY: PALETTA PAD
 PERMIT: 05771

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

WATERSHED: WEST FORK RIVER
 DISTRICT: UNION
 COUNTY: HARRISON
 SURFACE OWNER: DOMINECK PALETTA, ESTATE
 OIL & GAS ROYALTY OWNER: DOMINECK PALETTA, DAINE G. SULLIVAN
 ACREAGE: 7.52 ±
 ACREAGE: 253.69 ± (LEASE)

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

CONVERT
 PLUG & ABANDON
 CLEAN OUT & REFLUG
 OTHER CHANGE (SPECIFY) AS-DRIILLED

TARGET FORMATION: MARCELLUS

DESIGNATED AGENT: WILLIAM VEIGEL
 ADDRESS: 65 PROFESSIONAL PLACE, SUITE 200
 CITY: BRIDGEPORT
 STATE: WV
 ZIP CODE: 26330

DATE: 06-22-2017

WELL OPERATOR: ARSENAL RESOURCES
 CITY: WEXFORD
 STATE: WV
 ZIP CODE: 15090

LEGEND:
 ○ PROPOSED SURFACE HOLE / BOTTOM HOLE
 * EXISTING / PRODUCING WELLS
 X ABANDONED WELL
 X PLUGGED & ABANDONED WELL
 △ CUT CONDUCTOR
 --- LEASE BOUNDARY
 --- 500' DHP BUFFER
 --- AS-DRIILLED PATH
 --- PROPOSED PATH

REVISIONS:
 DRAWN BY: R. DOERR
 SCALE: 1" = 2000'
 DRAWING NO.: 030-3243
 WELL LOCATION PLAT