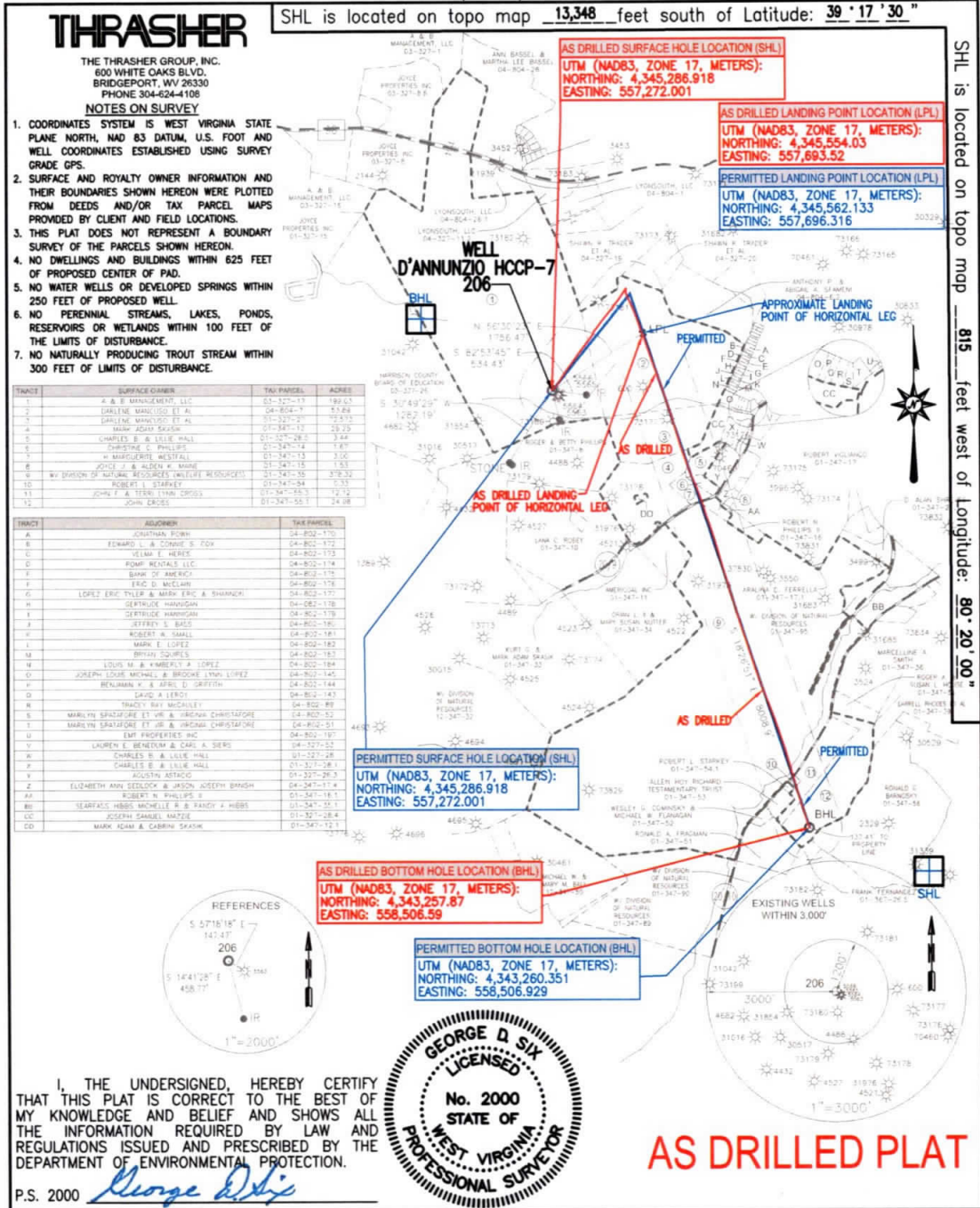


BHL is located on topo map 4,852 feet south of Latitude: 39° 15' 00"

SHL is located on topo map 13,348 feet south of Latitude: 39° 17' 30"



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

- NOTES ON SURVEY**
- COORDINATES SYSTEM IS WEST VIRGINIA STATE PLANE NORTH, NAD 83 DATUM, 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.

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	A & B MANAGEMENT, LLC	03-327-11	189.63
2	DARLENE MANUCCI ET AL	04-804-Y	83.89
3	DARLENE MANUCCI ET AL	01-327-20	70.53
4	MARK ADAM SKASH	01-347-12	23.29
5	CHARLES E & LILLIE HALL	01-327-28-2	2.44
6	CHRISTINE C. PHILLIPS	01-347-14	7.89
7	MARGUERITE WESTFALL	01-347-13	3.26
8	JONAS J. & ALLEN H. WARD	01-347-15	1.83
9	WY DIVISION OF NATURAL RESOURCES	01-347-30	378.30
10	ROBERT L. STARKEY	01-347-34	7.37
11	JOHN F. & TERRY TRAM CROSS	01-347-55-1	24.98
12	JOHN CROSS	01-347-55-1	24.98

TRACT	ADJOINER	TAX PARCEL
A	JOYCEAN FORB	04-802-170
B	EDWARD L. & CONNIE S. FOX	04-802-172
C	WELMA E. HENRY	04-802-173
D	PUMP WELLS, LLC	04-802-174
E	BANK OF AMERICA	04-802-175
F	ERIC D. McLEAN	04-802-176
G	LOPEZ ERIC TYLER & MARY ERIC & SHANON	04-802-177
H	DETRUDE HANSHAM	04-802-178
I	DETRUDE HANSHAM	04-802-179
J	JEFFREY S. BAUS	04-802-180
K	ROBERT A. SMALL	04-802-181
L	MARK E. LOPEZ	04-802-182
M	BRIAN SQUIRES	04-802-183
N	LEON W. & MARGIE A. LOPEZ	04-802-184
O	JOSEPH LOUIS MICHAEL & BRODIE LYNN LOPEZ	04-802-185
P	BENJAMIN K. & APRIL D. GRIFFIN	04-802-186
Q	DAVID A. LENDI	04-802-187
R	TRACY BEV. McCOY	04-802-188
S	MARLYN SPRADZURE ET VIR & VIRGINIA CHRISTOPHE	04-802-189
T	MARLYN SPRADZURE ET VIR & VIRGINIA CHRISTOPHE	04-802-190
U	EMP PROPERTIES INC	04-802-191
V	LAUREN E. BENEVIDI & CARL A. SERO	04-327-23
W	CHARLES B. & LILLIE HALL	01-327-28
X	CHARLES E. & LILLIE HALL	01-327-28-2
Y	JUSTIN METZGER	01-327-28-3
Z	ELDMETH ANN SEEDOCK & JASON JOSEPH BRANSH	04-347-17-4
AA	ROBERT N. PHILLIPS II	01-347-18-1
BB	SEBRACE HIBBS McCELLE & RANDY A HIBBS	01-347-18-1
CC	JOSEPH SAMUEL MATZE	01-347-28-4
DD	MARK ADAM & CARRIN SKASH	01-347-12-1

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. 2000 *George D. Six*



<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: <u>1/200</u></p> <p>PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p>	<p>D'ANNUNZIO HCCP-7</p> <p>OPERATOR'S WELL #: <u>206</u></p> <p>API WELL #: <u>47</u> <u>33</u> <u>05915</u></p> <p>STATE COUNTY PERMIT</p>
	<p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: <u>WEST FORK</u> ELEVATION: <u>1117.8'</u> (DESIGN)</p> <p>DISTRICT: <u>CLARK-CLARKSBURG CORP</u> COUNTY: <u>HARRISON</u> QUADRANGLE: <u>CLARKSBURG/MOUNT CLARE</u></p> <p>SURFACE OWNER: <u>A. & B. MANAGEMENT, LLC.</u> ACREAGE: <u>± 199.03</u></p> <p>OIL & GAS ROYALTY OWNER: <u>A. & B. MANAGEMENT, LLC.</u> ACREAGE: <u>± 199.03</u></p> <p>DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) <u>AS-DRILLED PLAT</u></p> <p>TARGET FORMATION: <u>MARCELLUS</u> ESTIMATED DEPTH: <u>7,249 TVD 16,031 TMD</u></p>	
<p>WELL OPERATOR: <u>ARSENAL RESOURCES</u> DESIGNATED AGENT: <u>WILLIAM VEIGEL</u></p> <p>ADDRESS: <u>6031 WALLACE ROAD EXTENSION #300</u> ADDRESS: <u>65 PROFESSIONAL PLACE, SUITE 200</u></p> <p>CITY: <u>WEXFORD</u> STATE: <u>PA</u> ZIP CODE: <u>15090</u> CITY: <u>BRIDGEPORT</u> STATE: <u>WV</u> ZIP CODE: <u>26330</u></p>	<p>LEGEND:</p> <p>○ PROPOSED SURFACE HOLE BOTTOM HOLE</p> <p>○ EXISTING / PRODUING WELLHEAD</p> <p>LPLx LANDING POINT LOCATION</p> <p>○ EXISTING WATER WELL</p> <p>○ EXISTING SPRING</p> <p>--- SURVEYED BOUNDARY</p> <p>--- DRILLING UNIT</p> <p>--- LEASE BOUNDARY</p> <p>--- PROPOSED PATH</p> <p>--- AS DRILLED PATH</p> <p>--- 500' BUFFER</p>	<p>REVISIONS:</p> <p>△ REVISED XXX MM-DD-YYYY</p> <p>DATE: <u>05-03-2019</u></p> <p>FILE NO: <u>XXXXX</u></p> <p>DRAWN BY: <u>R.DOERR</u></p> <p>SCALE: <u>1" = 2000'</u></p> <p>DRAWING NO: <u>030-3250</u></p> <p>WELL LOCATION PLAT 3</p>

BHL is located on topo map 8,613 feet west of Longitude: 80° 17' 30"

SHL is located on topo map 815 feet west of Longitude: 80° 20' 00"

WR-36
Rev. 5/08

Date: 4/22/19
Operators Well Number: D'Annunzio HCCP 7 206
API Well No: 47-033 - 05915

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of
Initial Gas-Oil Ratio

Well Operator Arsenal Resources LLC
Address 6031 Wallace Road Ext. Suite 300
Wexford, PA 15090

Designated Agent William Veigel
Address 65 Professional Place, Suite 200
Bridgeport, WV 26330

Geological Target Formation: Marcellus Depth 7687 feet
Perforation Interval 8014-15976 feet

Guidelines for testing:

1. A minimum of gas vented or flared.
2. A 24 hour pre-flow into pipelines or tanks.
3. Uniform producing rate during the 24 hour test per test period.
4. Measurement standards as for Form WR-39, "Report of Annual Production" (see 35CSR4-15)
5. Separate Form WR-36 for each producing formation in a multiple completion.

TEST DATA

Start of Test Date 4/1/19	Time 08:00 AM	End of Test Date 4/2/19	Time 08:00 AM	Duration of Test 24 hrs
Tubing Pressure NA	Casing Pressure 1319	Separator Pressure 503	Separator Temperature 79	
Oil Production During Test 0	Gas Production During Test 10,610	Water Production During Test 896		
BBLs	MCF	BBLs	79,160	-Salinity
Oil Gravity NA	Producing Method (flowing, pumping, gas lift etc.) Flowing			
API				

GAS PRODUCTION

Measurement Method Flange Tap <input checked="" type="checkbox"/> Pipe Tap <input type="checkbox"/> L-10 <input type="checkbox"/>		Positive Choke <input type="checkbox"/>
		Positive flow prover <input checked="" type="checkbox"/>
Orifice diameter	Pipe Diameter (inside)	Nominal Choke Size inches 42/64"
Differential Pressure range	Max. Static pressure range	Prover and Orifice diameter - inches 3.826" run with 2.75" orifice
Differential 85.5		Static
Gas Gravity (Air = 1.0) Measured .5734 Estimated	Flowing Temperature 79	Gas Temperature 60
24 Hour Coefficient	24 Hour coefficient pressure PSIA	

TEST RESULTS

Daily Oil 0	Daily Water 896 BBLs	Daily Gas 10,610 MCF	Gas-Oil Ratio NA
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Arsenal Resources LLC

Well Operator

BY _____

ITS: Designated Agent _____

BHL is located on topo map 4,852 feet south of Latitude: 39° 15' 00"

SHL is located on topo map 13,348 feet south of Latitude: 39° 17' 30"

THRASHER

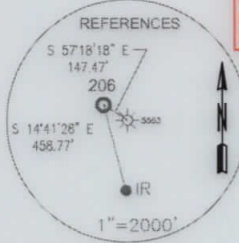
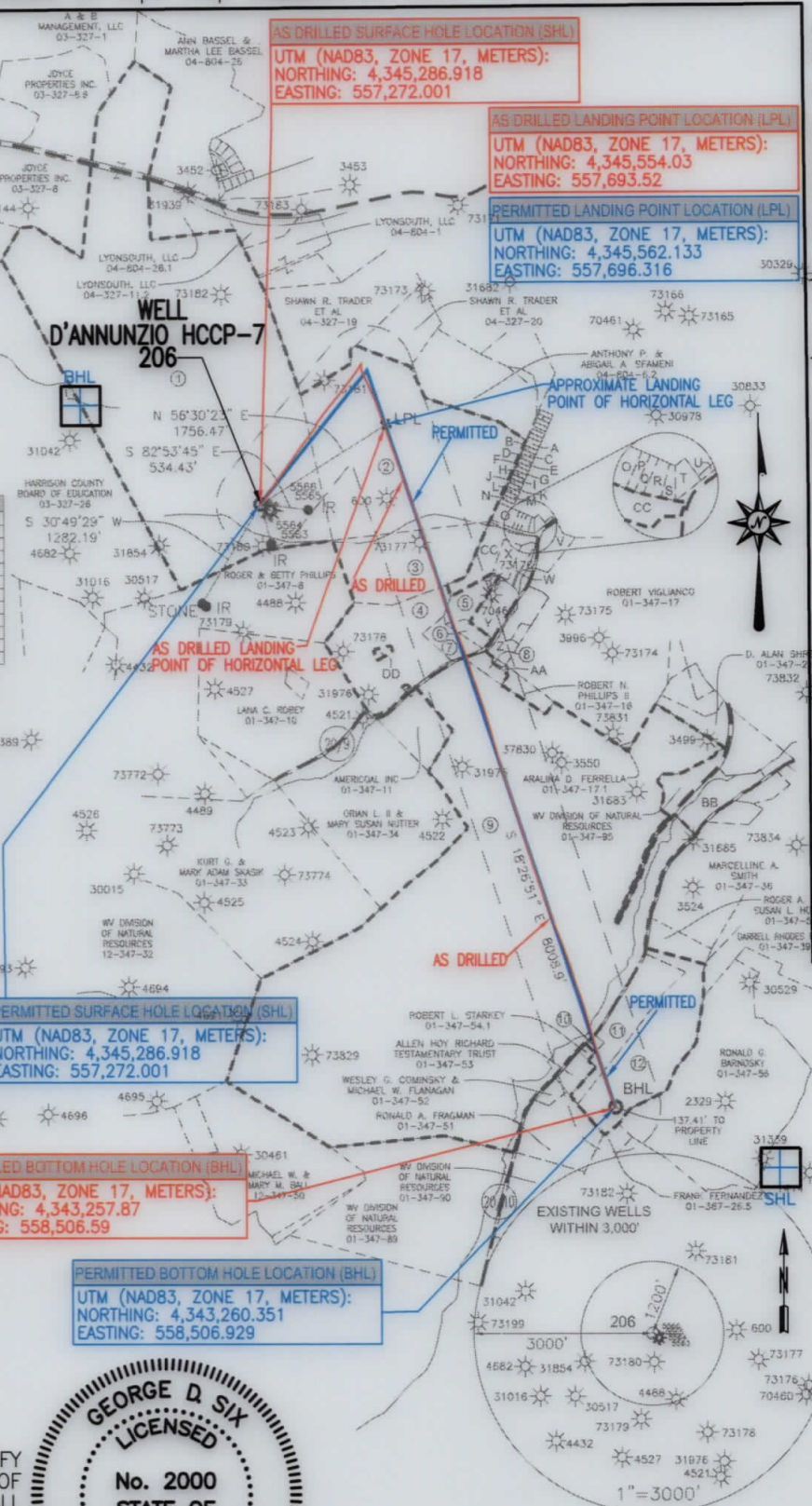
THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

NOTES ON SURVEY

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- 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.

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	A & B MANAGEMENT, LLC	03-327-17	199.03
2	DARLENE MANGUSO ET AL	04-804-7	53.89
3	DARLENE MANGUSO ET AL	01-327-27	72.573
4	MARK ADAM SKASIS	01-347-12	29.25
5	CHARLES B. & LILLIE HALL	01-327-26.5	3.44
6	CHRISTINE C. PHILLIPS	01-347-16	1.67
7	H MARGUERITE WESTFALL	01-347-13	3.60
8	JOYCE & ALDEN F. MARNE	01-347-15	1.53
9	WV DIVISION OF NATURAL RESOURCES (WILDLIFE RESOURCES)	01-347-35	378.32
10	ROBERT L. STARKEY	01-347-54	0.33
11	JOHN F. & TERRI LYNN CROSS	01-347-55.3	12.12
12	JOHN CROSS	01-347-55.1	24.96

TRACT	ADJOINER	TAX PARCEL
A	JONATHAN ROWH	04-802-170
B	EDWARD L. & CONNIE S. COX	04-802-172
C	VELMA E. HERES	04-802-173
D	PUMP RENTALS LLC	04-802-174
E	BANK OF AMERICA	04-802-175
F	ERIC D. MCKLAIN	04-802-176
G	LOPEZ ERIC TYLER & MARK ERIC & SHANNON	04-802-177
H	GERTRUDE HANNIGAN	04-802-178
I	GERTRUDE HANNIGAN	04-802-179
J	JEFFREY S. BASS	04-802-180
K	ROBERT W. SMALL	04-802-181
L	MARK E. LOPEZ	04-802-182
M	BRYAN SQUIRES	04-802-183
N	LOUIS M. & KIMBERLY A. LOPEZ	04-802-184
O	JOSEPH LOUIS MICHAEL & BRODENE LYNN LOPEZ	04-802-145
P	BENJAMIN K. & APRIL D. GRIFFITH	04-802-144
Q	DAVID A. LEROY	04-802-143
R	TRACEY RAY McCAULEY	04-802-89
S	MARILYN SPATAFORE ET VIR & VIRGINIA CHRISTAFORE	04-802-52
T	MARILYN SPATAFORE ET VIR & VIRGINIA CHRISTAFORE	04-802-51
U	EMT PROPERTIES INC.	04-802-197
V	LAUREN E. BENEDUM & CARL A. SIERS	04-327-53
W	CHARLES B. & LILLIE HALL	01-327-28
X	CHARLES B. & LILLIE HALL	01-327-28.1
Y	AUGUSTIN ASTACIO	01-327-28.3
Z	ELIZABETH ANN SEDLOCK & JASON JOSEPH BANISH	04-347-17.4
AA	ROBERT N. PHILLIPS II	01-347-16.1
BB	SEARFASS HIBBS MICHELLE R. & RANDY A. HIBBS	01-347-35.1
CC	JOSEPH SAMUEL MAZZIE	01-327-28.4
DD	MARK ADAM & CARRINI SKASIS	01-347-12.1



AS DRILLED BOTTOM HOLE LOCATION (BHL)
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,343,257.87
EASTING: 558,506.59

PERMITTED BOTTOM HOLE LOCATION (BHL)
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,343,260.351
EASTING: 558,506.929



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. 2000 *George D. Six*

AS DRILLED PLAT

<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: <u>1/200</u></p> <p>PROVEN SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)</p>	<p>D'ANNUNZIO HCCP-7</p> <p>OPERATOR'S WELL #: <u>206</u></p> <p>API WELL #: <u>47</u> STATE <u>33</u> COUNTY <u>05915</u> PERMIT <u>H6A</u></p>
	<p>WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/></p> <p>WATERSHED: <u>WEST FORK</u></p> <p>DISTRICT: <u>CLARK-CLARKSBURG CORP</u> COUNTY: <u>HARRISON</u></p> <p>SURFACE OWNER: <u>A. & B. MANAGEMENT, LLC.</u></p> <p>OIL & GAS ROYALTY OWNER: <u>A. & B. MANAGEMENT, LLC.</u></p> <p>DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/></p> <p>CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) <u>AS-DRILLED PLAT</u></p> <p>TARGET FORMATION: <u>MARCELLUS</u> ESTIMATED DEPTH: <u>7,249</u> TVD <u>16,031</u> TMD</p>	<p>ELEVATION: <u>1117.8'</u> (DESIGN)</p> <p>QUADRANGLE: <u>CLARKSBURG/MOUNT CLARE</u></p> <p>ACREAGE: <u>± 199.03</u></p> <p>ACREAGE: <u>± 199.03</u></p>
<p>WELL OPERATOR: <u>ARSENAL RESOURCES</u></p> <p>ADDRESS: <u>6031 WALLACE ROAD EXTENSION #300</u></p> <p>CITY: <u>WEXFORD</u> STATE: <u>PA</u> ZIP CODE: <u>15090</u></p>	<p>DESIGNATED AGENT: <u>WILLIAM VEIGEL</u></p> <p>ADDRESS: <u>65 PROFESSIONAL PLACE, SUITE 200</u></p> <p>CITY: <u>BRIDGEPORT</u> STATE: <u>WV</u> ZIP CODE: <u>26330</u></p>	

<p>LEGEND:</p> <ul style="list-style-type: none"> ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ⊙ EXISTING / PRODUCING WELLHEAD LPL* LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊙ EXISTING SPRING --- SURVEYED BOUNDARY - - - DRILLING UNIT - - - LEASE BOUNDARY --- PROPOSED PATH --- AS DRILLED PATH --- 500' BUFFER 	<p>REVISIONS:</p> <ul style="list-style-type: none"> △ REVISED XXX MM-DD-YYYY 	<p>DATE: <u>05-03-2019</u></p> <p>FILE NO: <u>XXXXX</u></p> <p>DRAWN BY: <u>R.DOERR</u></p> <p>SCALE: <u>1" = 2000'</u></p> <p>DRAWING NO: <u>030-3250</u></p> <p>WELL LOCATION PLAT <u>3</u></p>
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SHL is located on topo map 815 feet west of Longitude: 80° 20' 00"

BHL is located on topo map 8613 feet west of Longitude: 80° 17' 30"