

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

RECEIVED  
Office of Oil and Gas

MAY 11 2020

API 47-051-02012 County Marshall District Franklin  
Quad Powhatan Point Pad Name MND-20 Field/Pool Name WV Department of Environmental Protection  
Farm name CCC/Murray Energy Well Number MND-20BU  
Operator (as registered with the OOG) HG Energy II  
Address 5260 Dupont Road City Parkersburg State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4411315.6 Easting 516839.1  
Landing Point of Curve Northing 4410656.3 Easting 516530.8  
Bottom Hole Northing 4407542.8 Easting 518797.0

Elevation (ft) 1058 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)  
Air/OMB

KCL, Barite, Lime, CaCL, graphite, base oil, clay, sulfatone, petrogel

Date permit issued 8/27/2018 Date drilling commenced 8/28/2018 Date drilling ceased 12/29/2018  
Date completion activities began 3/7/2019 Date completion activities ceased 6/24/2019  
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 450 Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 545 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) Y

Reviewed by:

*Juan M. ...*  
6/15/2020

API 47-051 - 02012 Farm name CCC/Murray Energy Well number MND-20BU

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"	30"	100'	new	J55 157.5 lb/ft		N
Surface	26"	20"	945'	new	J55 94 lbs/ft		Y
Coal							
Intermediate 1	17.5	13.375"	2694'	New	J55 68 lbs/ft		Y
Intermediate 2	12.25"	9.625"	9875'	New	P-110 47lbs/ft		Y
Intermediate 3							
Production	8.5"	6.625/5.5	9514/24288'	New	25 28.6/P110		Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor						Drilled in	
Surface	Class A	1765	15.6	1.19	2105	Surface	8
Coal							
Intermediate 1	Class A	1435 lead 625 tail	15.2/15.8	1.26/1.33	1808/831	Surface	8
Intermediate 2	Class A	395 lead/1450 tail	13.5/ 15	1.66/ 1.14	2335/1651	Surface	8
Intermediate 3							
Production	Class H	4305	16.4	1.07	4565	1760	8
Tubing							

Drillers TD (ft) 24325 Loggers TD (ft) \_\_\_\_\_  
 Deepest formation penetrated Point Pleasant Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 9976' 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 30": N/A 20" centralizers every 3 joints to surface, 13.375" bow springs on first 2 joints then every 100' from surface 9.625" Bow spring on first 8 joints then every 3rd joint from surface 6.625/5.5" 1 spiral centralizer every 5 joints from top of curve to surface 1 spiral centralizer every 3 joints from 1st 5.5 long joint to the top of the curve.

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 \_\_\_\_\_





**HG Energy II Appalachia, LLC**  
**Perforation Record**

Stage #	Perforation Date	Perforation from depth	Perforation to depth	Number of perfs	Formation
1	3/19/2019	24200	24099	38	Point Pleasant
2	4/23/2019	24,082	23,922	45	Point Pleasant
3	4/23/2019	23,884	23,724	45	Point Pleasant
4	4/23/2019	23,686	23,526	45	Point Pleasant
5	4/24/2019	23,488	23,328	45	Point Pleasant
6	4/24/2019	23,290	23,130	45	Point Pleasant
7	4/25/2019	23,092	22,932	45	Point Pleasant
8	4/25/2019	22,894	22,734	45	Point Pleasant
9	4/25/2019	22,696	22,536	45	Point Pleasant
10	4/26/2019	22,498	22,338	45	Point Pleasant
11	4/26/2019	22,300	22,140	45	Point Pleasant
12	4/27/2019	22,102	21,942	45	Point Pleasant
13	4/27/2019	21,904	21,744	45	Point Pleasant
14	4/28/2019	21,706	21,546	45	Point Pleasant
15	4/28/2019	21,508	21,348	45	Point Pleasant
16	4/28/2019	21,310	21,150	45	Point Pleasant
17	4/29/2019	21,112	20,952	45	Point Pleasant
18	4/29/2019	20,914	20,754	45	Point Pleasant
19	4/30/2019	20,716	20,556	45	Point Pleasant
20	4/30/2019	20,518	20,358	45	Point Pleasant
21	4/30/2019	20,320	20,160	45	Point Pleasant
22	4/30/2019	20,122	19,962	45	Point Pleasant
23	5/1/2019	19,924	19,764	45	Point Pleasant
24	5/1/2019	19,726	19,566	45	Point Pleasant
25	5/1/2019	19,528	19,368	45	Point Pleasant
26	5/2/2019	19,330	19,170	45	Point Pleasant
27	5/2/2019	19,132	18,972	45	Point Pleasant
28	5/3/2019	18,934	18,774	45	Point Pleasant
29	5/3/2019	18,736	18,576	45	Point Pleasant
30	5/3/2019	18,538	18,378	45	Point Pleasant
31	5/3/2019	18,340	18,180	45	Point Pleasant
32	5/4/2019	18,142	17,982	45	Point Pleasant
33	5/4/2019	17,944	17,784	45	Point Pleasant
34	5/4/2019	17,746	17,586	45	Point Pleasant
35	5/5/2019	17,548	17,388	45	Point Pleasant
36	5/5/2019	17,350	17,190	45	Point Pleasant
37	5/6/2019	17,152	16,992	45	Point Pleasant
38	5/6/2019	16,954	16,794	45	Point Pleasant
39	5/7/2019	16,756	16,596	45	Point Pleasant
40	5/7/2019	16,558	16,398	45	Point Pleasant
41	5/7/2019	16,360	16,200	45	Point Pleasant
42	5/7/2019	16,162	16,002	45	Point Pleasant
43	5/8/2019	15,964	15,804	45	Point Pleasant
44	5/8/2019	15,765	15,605	45	Point Pleasant
45	5/8/2019	15,565	15,405	45	Point Pleasant
46	5/10/2019	15,365	15,205	45	Point Pleasant
47	5/10/2019	15,165	15,005	45	Point Pleasant
48	5/10/2019	14,965	14,805	45	Point Pleasant
49	5/11/2019	14,765	14,605	45	Point Pleasant
50	5/11/2019	14,565	14,405	45	Point Pleasant
51	5/11/2019	14,365	14,205	45	Point Pleasant
52	5/11/2019	14,165	14,005	45	Point Pleasant
53	5/12/2019	13,965	13,805	45	Point Pleasant

**HG Energy II Appalachia, LLC**

**Lithology Report**

**MND-20BU**

**Actual tops**

1083 RKB

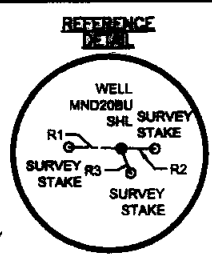
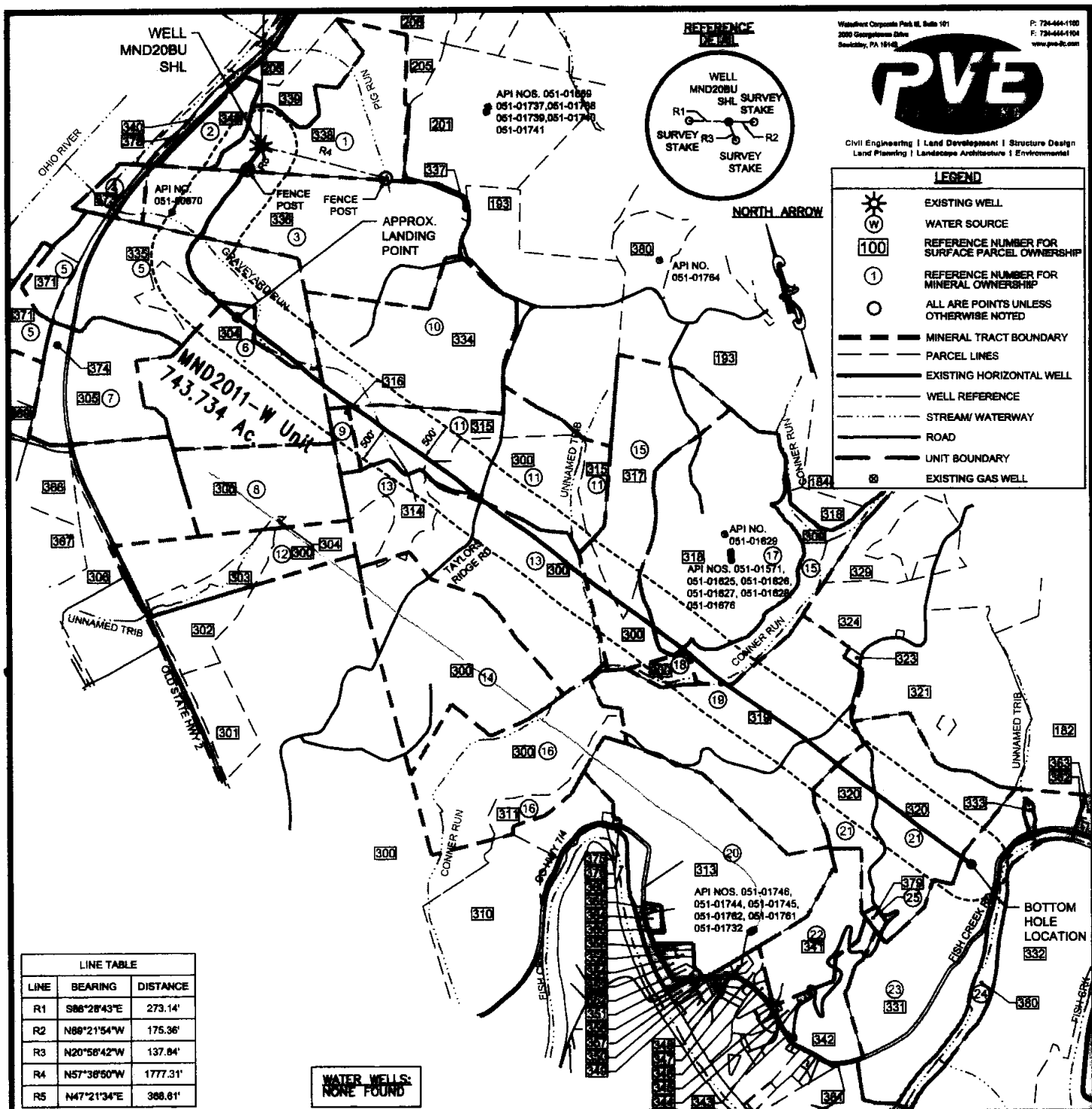
Formation	Top MD	TVD		Base MD	TVD	Formation Description
Coal	213	213		216	216	
Other Coals	465	465		470	470	
Freshwater show	450	450		452	452	1/2" stream only observed water show
Pittsburgh Coal	545	545		553	553	
Greenbrier Big Lime	1583	1583		1600	1600	Limestone
Loyalhanna Big Injun	1673	1673		1712	1712	Sandstone
Pocono Big Injun	1763	1763		1916	1916	Sandstone
Price	2260	2260		2290	2290	Sandstone
50' sand	2386	2386		2416	2416	Sandstone
Gordon Stray	2464	2464		2481	2481	sandstone
Speechley	3246	3244		3386	3388	shale
Java	4804	4763		4847	4803	shale, first gas show (155 units @ 4766')
Rhinestreet	5614	5536		5935	5843	shale
Cashaqua	5935	5843		6102	5907	shale
MiddleSex	6102	5907		6032	5936	shale
West River	6032	5936		6067	5969	shale
Burket	6067	5969		6093	5994	shale
Tully	6093	5994		6116	6016	Limestone
Hamilton	6116	6016		6144	6043	shale
Marcellus	6144	6043		6198	6095	shale, 1800 units peak gas
Onondaga	6198	6095		6253	6147	Limestone
Huntersville	6253	6147		6313	6205	chert,shale
Oriskany	6313	6205		6523	6405	sandstone, siltstone,limestone
Helderburg	6523	6406		6733	6609	Limestone
Bass Island	6733	6609		6931	6799	Dolomite
Salina	6931	6799		7999	7822	salt, dolomite, anhydrite
Lockport	7999	7822		8154	7970	Dolomite
Newburg	8154	7970		8393	8201	Dolomite, mudstone
Rochester	8393	8201		8618	8415	shale
Dayton/Packer	8618	8415		8755	8546	fossiliferous shale/Dolomite/Limestone
Rose Hill	8755	8546		8831	8618	shale
Clinton	8831	8618		8958	8739	Sandstone,shale
Medina	8958	8739		8997	8776	shale,sandstone
Queenstone(880)	8997	8776		9819	9580	red shale
Reedsville (470)	9819	9580		10317	10059	grey shale
Utica (613')	10317	10059		11178	10642	Limey shale
PP (86)	11178	10642		24325	10969	Limey shale

**HG Energy II Appalachia, LLC**  
**Stimulation Record**

Stage #	Date	Ave pump rate (BPM)	Ave Treatment Press (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant (LBS)	Water (BBLs)
1	3/19/2019	61.0	11789	8275	7822	35000	8536
2	4/23/2019	70.0	11,517	8,984	7,724	438900	9,752
3	4/23/2019	71.0	10,845	9,363	7,265	447300	9,344
4	4/23/2019	70.0	11,044	10,706	7,982	508900	12,499
5	4/24/2019	69.0	10,906	10,382	7,495	508900	10,588
6	4/24/2019	70.0	10,569	9,238	7,736	506200	11,040
7	4/25/2019	72.0	10,626	8,856	7,745	513300	10,414
8	4/25/2019	71.0	10,630	9,318	8,017	522600	10,146
9	4/25/2019	71.3	10,623	9,028	8,052	521100	10,553
10	4/26/2019	68.0	10,414	9,457	7,942	544300	10,083
11	4/26/2019	73.7	10,715	8,633	7,899	546100	9,997
12	4/27/2019	71.0	10,613	8,527	7,606	547700	10,181
13	4/27/2019	68.9	10,662	10,093	7,960	551500	10,198
14	4/28/2019	72.6	10,616	9,557	7,926	573600	10,147
15	4/28/2019	73.0	10,814	9,956	8,319	553200	9,902
16	4/28/2019	74.5	10,772	9,988	7,611	548900	10,064
17	4/29/2019	74.0	10,735	9,101	7,534	524500	9,935
18	4/29/2019	75.0	10,722	9,344	7,904	525200	9,626
19	4/30/2019	77.8	10,821	9,198	7,829	547900	9,839
20	4/30/2019	79.0	10,659	8,598	7,902	529400	9,622
21	4/30/2019	75.1	10,649	10,270	7,133	535400	9,772
22	4/30/2019	77.7	10,705	10,512	7,690	551800	9,809
23	5/1/2019	79.0	10,619	10,482	7,943	519700	9,182
24	5/1/2019	76.0	10,654	10,644	7,143	520700	9,239
25	5/1/2019	78.2	10,481	10,291	7,393	519000	9,187
26	5/2/2019	80.1	10,712	10,162	7,938	519700	9,422
27	5/2/2019	76.6	10,728	9,567	7,898	519800	9,368
28	5/3/2019	78.8	10,574	9,798	7,212	519200	9,469
29	5/3/2019	80.0	10,372	10,337	7,176	510300	9,140
30	5/3/2019	77.0	10,220	10,387	7,712	506400	9,229
31	5/3/2019	79.6	10,449	8,690	7,926	511000	9,065
32	5/4/2019	79.8	10,513	8,958	8,376	510600	9,113
33	5/4/2019	79.0	10,207	10,071	8,044	517800	9,285
34	5/4/2019	78.0	10,485	8,081	7,411	520100	9,125
35	5/5/2019	81.7	10,096	9,502	7,196	519400	9,110
36	5/5/2019	81.4	10,049	8,866	7,368	522200	9,269
37	5/6/2019	81.0	10,055	10,596	7,783	520900	9,324
38	5/6/2019	79.7	10,132	10,401	7,866	414500	8,289
39	5/7/2019	75.8	9,999	9,651	7,796	545100	10,674
40	5/7/2019	80.0	9,793	9,043	7,543	519200	9,334
41	5/7/2019	79.7	9,629	8,752	7,590	519200	9,122
42	5/7/2019	77.9	9,651	9,888	6,671	521100	9,179
43	5/8/2019	84.0	9,547	9,575	7,224	519800	9,242
44	5/8/2019	85.0	9,830	10,836	7,815	520100	9,196
45	5/8/2019	83.0	9,848	9,025	8,030	519300	9,057
46	5/10/2019	88.0	9,936	9,166	7,634	520900	9,143
47	5/10/2019	89.0	9,805	10,227	7,897	521400	9,181
48	5/10/2019	86.9	9,923	7,746	7,998	519900	9,188
49	5/11/2019	84.7	9,852	9,487	7,327	519800	9,152
50	5/11/2019	88.0	9,925	8,715	7,717	523400	9,046
51	5/11/2019	88.9	9,695	6,956	7,932	522800	8,998
52	5/11/2019	87.9	9,611	8,871	7,914	521500	9,089
53	5/12/2019	89.0	8,950	8,946	6,127	520100	9,070







Westcott Corporate Park II, Suite 101  
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LEGEND	
	EXISTING WELL
	WATER SOURCE
	REFERENCE NUMBER FOR SURFACE PARCEL OWNERSHIP
	REFERENCE NUMBER FOR MINERAL OWNERSHIP
	ALL ARE POINTS UNLESS OTHERWISE NOTED
	MINERAL TRACT BOUNDARY
	PARCEL LINES
	EXISTING HORIZONTAL WELL
	WELL REFERENCE
	STREAM/WATERWAY
	ROAD
	UNIT BOUNDARY
	EXISTING GAS WELL

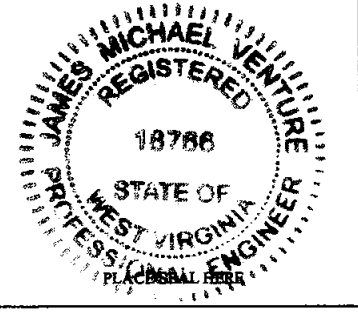
LINE TABLE		
LINE	BEARING	DISTANCE
R1	S88°28'43"E	273.14'
R2	N88°21'54"W	175.36'
R3	N20°58'42"W	137.84'
R4	N57°38'50"W	1777.31'
R5	N47°21'34"E	388.81'

WATER WELLS:  
NONE FOUND

FILE #: MND 20 BU - AS DRILLED  
DRAWING #: MND 20 BU - AS DRILLED  
SCALE: 1"=2000'  
MINIMUM DEGREE OF ACCURACY: 1/2500  
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.58'

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.

SIGNED:   
R.P.E.: 21452 L.L.S.: P.S. NO. \_\_\_\_\_



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25304

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: SHORT CREEK-OHIO RIVER  
COUNTY/DISTRICT: MARSHALL / FRANKLIN  
SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY  
OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY) \_\_\_\_\_

TARGET FORMATION: POINT PLEASANT  
WELL OPERATOR: HG ENERGY II APPALACHIA, LLC  
Address: 5260 DUPONT ROAD  
City PARKERSBURG State WV Zip Code 26101



DATE: MARCH 27, 2020  
OPERATOR'S WELL #: MND 20 BU  
API WELL # 47 051 02012  
STATE COUNTY PERMIT

ELEVATION: 1,058'  
QUADRANGLE: POWHATAN POINT, W. VA./OHIO  
ACREAGE: 70.55  
ACREAGE: 70.55

ESTIMATED DEPTH: TVD: 10,969' TMD: 24,325 LATERAL: 12,650  
DESIGNATED AGENT: DIANE C. WHITE  
Address: 5260 DUPONT ROAD  
City PARKERSBURG State WV Zip Code 26101

Bottom Hole is located on topo map 8,495 feet south of Latitude: 39° 50' 00"

Well is located on topo map 5,710 feet south of Latitude: 39° 52' 30"

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

Bottom Hole is located on topo map 3,226 feet west of Longitude: 80° 45' 00"  
 Well is located on topo map 8,531 feet west of Longitude: 80° 47' 30"

AS DRILLED

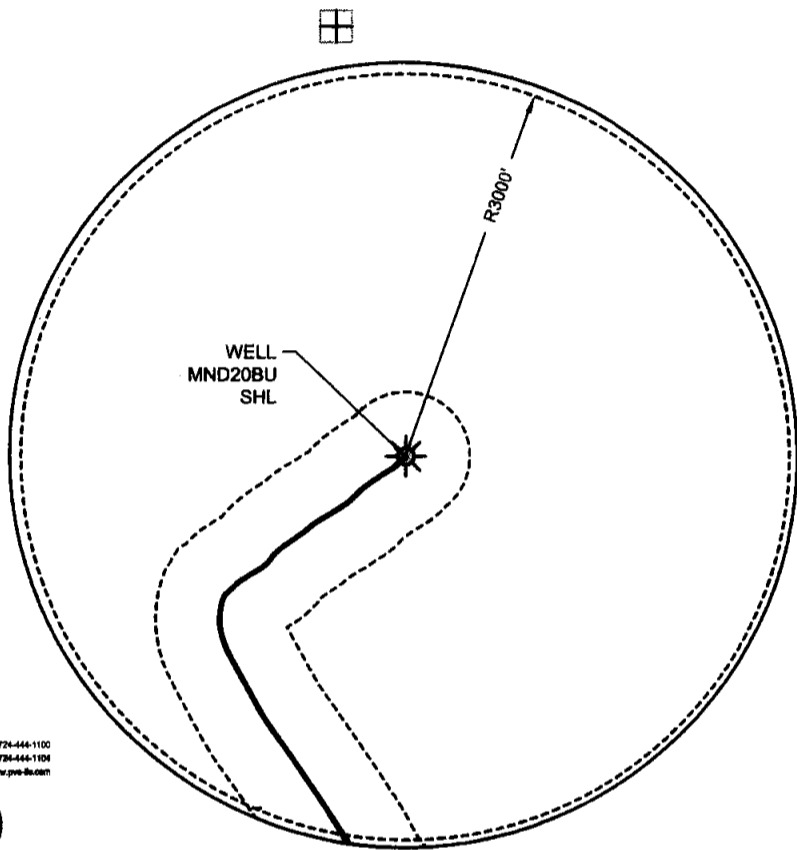
**SURFACE HOLE LOCATION (SHL)**  
 UTM 17 - NAD83  
 N: 4411315.6  
 E: 516838.1  
 NAD27, WV NORTH  
 N: 484848.5  
 E: 1634085.2  
 LAT/LON DATUM-NAD83  
 LAT: 38.851695  
 LON: -80.803153

APPROX. LANDING POINT

UTM 17 - NAD83  
 N: 4410858.3  
 E: 516530.8  
 NAD27, WV NORTH  
 N: 482881.9  
 E: 1633037.3  
 LAT/LON DATUM-NAD83  
 LAT: 38.845781  
 LON: -80.806773

BOTTOM HOLE LOCATION

UTM 17 - NAD83  
 N: 4407542.8  
 E: 518797.0  
 NAD27, WV NORTH  
 N: 482480.5  
 E: 1640303.1  
 LAT/LON DATUM-NAD83  
 LAT: 38.81661  
 LON: -80.780374



DETAIL:  
 SCALE: 1"=1,500'  
 NO DEEP WELLS PRESENT

LEGEND	
	TOPO MAP POINT
	TOPO MAP BOTTOM HOLE

Woodward Corporate Park III, Suite 101  
 2000 Chesapeake Drive  
 Beckley, PA 15745

P: 724-444-1100  
 F: 724-444-1104  
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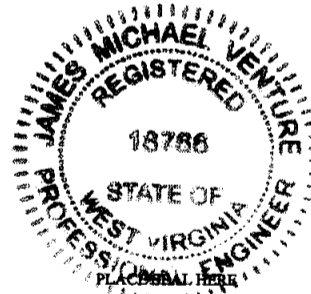
Civil Engineering | Land Development | Structure Design  
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 OF ELEVATION: H 138: 638.58'

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R.P.E.: 21452 L.L.S.: P.S. NO. \_\_\_\_\_



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304



DATE: MARCH 27, 2020

OPERATOR'S WELL #: MND 20 BU

API WELL # 47 051 02012  
 STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

PAGE: 2 OF 4

WATERSHED: SHORT CREEK-OHIO RIVER ELEVATION: 1,058'  
 COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWATAN POINT, W. VA./OHIO  
 SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY ACREAGE: 70.55  
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 70.55

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON   
 CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY)

TARGET FORMATION: POINT PLEASANT ESTIMATED DEPTH: TVD: 10,969' TMD: 24,325 LATERAL: 12,650  
 WELL OPERATOR: HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT: DIANE C. WHITE  
 Address: 5260 DUPONT ROAD Address: 5260 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

182 AEP GENERATION RESOURCES, INC.  
 183 CONSOLIDATION COAL COMPANY  
 184 CONSOLIDATION COAL COMPANY  
 185 CONSOLIDATION COAL COMPANY  
 186 CONSOLIDATION COAL COMPANY  
 187 CONSOLIDATION COAL COMPANY  
 188 OHIO POWER CO.  
 189 CONSOLIDATION COAL COMPANY  
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 191 CONSOLIDATION COAL COMPANY  
 192 CONSOLIDATION COAL COMPANY  
 193 OHIO POWER CO.  
 194 CNX GAS COMPANY LLC.  
 195 CONSOLIDATION COAL COMPANY  
 196 CONSOLIDATION COAL COMPANY  
 197 CONSOLIDATION COAL COMPANY  
 198 CONSOLIDATION COAL COMPANY  
 199 CONSOLIDATION COAL COMPANY  
 200 OHIO POWER CO.  
 201 SANCHEZ GENEVA BASSETT  
 202 OHIO POWER CO.  
 203 AEP GENERATION RESOURCES INC.  
 204 AEP GENERATION RESOURCES INC.  
 205 CONSOLIDATION COAL COMPANY  
 206 AEP GENERATION RESOURCES INC.  
 207 AEP GENERATION RESOURCES INC.  
 208 CONSOLIDATION COAL COMPANY  
 209 CONSOL MINING COMPANY LLC.  
 210 GATTS RICHARD L. - LIFE  
 211 MILLER EDWIN C.  
 212 GATTS RICHARD L. - LIFE  
 213 MURRAY ENERGY C/O LAND DEPT.  
 214 CONSOLIDATION COAL COMPANY  
 215 CONSOLIDATION COAL COMPANY  
 216 CONSOLIDATION COAL COMPANY  
 217 CONSOLIDATION COAL COMPANY  
 218 CONSOLIDATION COAL COMPANY  
 219 CONSOLIDATION COAL COMPANY  
 220 MITCHELL TAMMY L.  
 221 BERRISFORD C. WAYNE  
 222 SHIELDS ROBERT L & DONALD  
 223 SELLS JARED C.  
 224

TAX MAP NO. 05-0005-0012-0000-0000  
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 TAX MAP NO. 05-008A-0035-0000-0000

325 JOGNSON NORMAN G. ET. UX. - LIFE  
 326 BOARD OF EDUCATION  
 327 RUCKMAN LETHA I  
 328 RUCKMAN MARY D.  
 329 WHITE GLORIA JEAN  
 330 NOBEL ENERGY INC.  
 331 WALLACE KEVIN W.  
 332 GOUDY JOGN JOSEPH  
 333 KLEM ANNE C.  
 334 PERSINGER CLAYTON LEE ET. UX.  
 335 PERSINGER CLAYTON LEE ET. UX.  
 336 SCOTT RAYMOND A. JR. & LARRIETTE  
 337 VANSYCOC ISAAC LUKE  
 338 MORRIS JUNE  
 339 UNITED STATES OF AMERICA NAVIGABLE WATERWAYS  
 340 NIEMAN FRANCES E.  
 341 CLARK BEVERLY E.  
 342 RUCKMAN SHELDON R. ET. AL.  
 343 CALVARY M. E. CHURCH & CEMETERY  
 344 CALVARY M. E. CHURCH & CEMETERY  
 345 CALVARY M. E. CHURCH & CEMETERY  
 346 OHIO POWER COMPANY  
 347 OHIO POWER COMPANY  
 348 OHIO POWER COMPANY  
 349 OHIO POWER COMPANY  
 350 OHIO POWER COMPANY  
 351 CONSOLIDATION COAL COMPANY  
 352 CONSOLIDATION COAL COMPANY  
 353 CONSOLIDATION COAL COMPANY  
 354 JACKSON NORMAN THOMAS ET. AL.  
 355 UNKNOWN  
 356 ARRUDA JOHN F. ET. UX.  
 357 WV DIVISION OF NATURAL RESOURCES

TAX MAP NO. 05-008A-0034-0000-0000  
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 TAX MAP NO. 05-0005-0004-0001-0000  
 REFERENCE NO. Q-081860000

Waterford Corporate Park II, Suite 101  
 2080 Chesapeake Drive  
 Sewickley, PA 15143

P: 724-444-1100  
 F: 724-444-1104  
 www.pve-llc.com



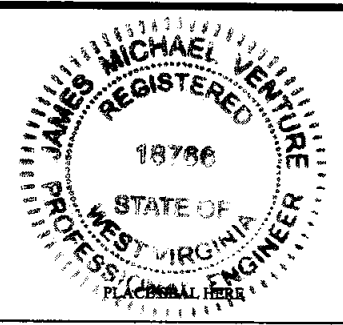
Civil Engineering | Land Development | Structure Design  
 Land Planning | Landscape Architecture | Environmental

LEGEND	
100	REFERENCE NUMBER FOR SURFACE PARCEL OWNERS
1	REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND 20 BU - AS DRILLED  
 DRAWING #: MND 20 BU - AS DRILLED  
 SCALE: 1"=2000'  
 MINIMUM DEGREE  
 OF ACCURACY: 1/2500  
 PROVEN SOURCE U.S.G.S. MONUMENT  
 OF ELEVATION: H 138: 638.58'

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.

SIGNED: [Signature]  
 R.P.E.: 21452 L.L.S.: P.S. NO. \_\_\_\_\_



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: SHORT CREEK-OHIO RIVER  
 COUNTY/DISTRICT: MARSHALL / FRANKLIN  
 SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY  
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
 PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON   
 CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY)

TARGET FORMATION: POINT PLEASANT  
 WELL OPERATOR: HG ENERGY II APPALACHIA, LLC  
 Address: 5280 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101



DATE: MARCH 27, 2020  
 OPERATOR'S WELL #: MND 20 BU  
 API WELL # 47 051 02012  
 STATE COUNTY PERMIT

PAGE: 3 OF 4

ELEVATION: 1,058'  
 QUADRANGLE: POWHATAN POINT, W. VA./OHIO  
 ACREAGE: 70.55  
 ACREAGE: 70.55

ESTIMATED DEPTH: TVD: 10,969' TMD: 24,325 LATERAL: 12,650  
 DESIGNATED AGENT: DIANE C. WHITE  
 Address: 5280 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101

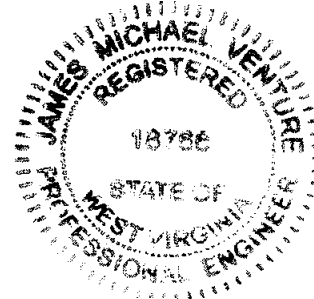
①	05-0001-0003-0000-0000	Behinds Edly the Behinds Page Hoover, a married women dealing in her sole and separate property	338
		Dara Marner and Douglas D. Marner, both individually and as wife and husband	
		Jessica McHabb the Jessica Faye Hoover, a married woman dealing in her sole and separate property	
		Cheryl Sullivan, a single woman	
		George H. Wells and Nancy Ekfund Wells, both individually and as husband and wife	
		William C.M. Wilson and Hiram C. Wilson, as Trustees of The Nancy L. Wilson Revocable Trust	
		Wayland W. Bowser, a married man dealing in his sole and separate property	
		Barbara G. Mathews, by Gay L. Mathews, Her Attorney in Fact	
		HG Energy, LLC	
②	05-0001-0002-0001-0000	HG Energy, LLC	340
③	05-0001-0010-0000-0000	Ruth Ann Ferris	336
		Larry F. Jefferson	
		Noble Marcellus, LP	
		Anacapa Holdings, LLC	
		HG Energy, LLC	
④	05-0001-0011-0000-0000	HG Energy, LLC	373
⑤	05-0001-0012-0000-0000	Susan Witten Neal Meyers AKA Susan Neal Ifield Meyeres, individually, and as Susan N. Meyers, Trustee of the Susan N. Meyers Revocable Trust	335
	05-0001-0015-0000-0000	Mary Witten Neal Wiseman FKA Mary Witten Neal	
		Mary Witten Hart Ehlers	
		Margery J. Witten	
		Joseph Moore Neal	
		Jane Witten Voth	
		Frances Gale Neal	
		Dorothy Ann Neal by her POA Jerry L. Berthold	
		Donald R. Hart Jr.	
		Cathy Hart Price	
		Ann Alexander	
		Jane R. Petarselm AKA Jane Petarselm	
		HG Energy, LLC	
⑥	05-0001-0013-0000-0000	HG Energy, LLC	305
⑦	05-0001-0016-0000-0000	HG Energy, LLC	304
⑧	05-0006-0003-0000-0000	HG Energy, LLC	300
⑨	05-0002-0001-0000-0000	HG Energy, LLC	316
⑩	05-0002-0003-0000-0000	HG Energy, LLC	334
⑪	05-0002-0002-0000-0000	HG Energy, LLC	315
⑫	05-0006-0003-0000-0000	HG Energy, LLC	300
⑬	05-0006-0003-0000-0000	HG Energy, LLC	300
	05-0006-0002-0000-0000		
⑭	05-0006-0003-0000-0000	HG Energy, LLC	300
	05-0006-0002-0000-0000		
⑮	05-0006-0003-0000-0000	HG Energy, LLC	300
	05-0005-0001-0000-0000		317
⑯	05-0006-0003-0000-0000	HG Energy, LLC	300
	05-0006-0004-0000-0000		311
⑰	05-0005-0002-0000-0000	Margaret Games	318
		Elizabeth Patterson	
		Charles J. Wisner	
		John Wisner	
		Kenneth Schmitt	
		Mary Ellen Sedon	
		Alfred Kaczorowski, Jr., & Sharon M. Kaczorowski, his wife	
⑱	05-0006-0003-0000-0000	HG Energy, LLC	300
⑲	05-0005-0003-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	319

⑳	05-0008-0002-0000-0000	HG Energy, LLC	313
㉑	05-0005-0004-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	320
		Charles Howard Bassett JR and Ruby D. Bassett	
		Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	
		Elizabeth A. Strusbaugh and James R. Strusbaugh	
		Janet and John Blankenship	
		Jean C. Thomas	
		Mary E. Bassett	
		Robert B. and Violet Thomas	
		Roger B. and Inban P. Rose	
		Ruth Ann and Furman F. Wallace	
		Ruth E. Bassett Meadows and O.W. Meadows Jr	
		Geneva Bassett Sanchez	
㉒	05-0008-0003-0000-0000	Tammy L. Mitchell et vir	341
㉓	05-0008-0005-0000-0000	Richard J. Getts	331
㉔	No Tract ID #	WV Division of Natural Resources	380
㉕	05-0005-0004-0001-0000	WV Division of Natural Resources	379

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